

elm creek

Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
email: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Barr Engineering
4300 Market Point Drive, Suite 200
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Presiding Officer Statement Regarding Holding Meetings via Telephone or Other Electronic Means

As the Presiding Officer for the Elm Creek Watershed Management Commission I find as follows:

- a. The spread of COVID-19 within the United States has raised serious public health concerns and resulted in a great deal of uncertainty since much remains unknown about the virus and how it spreads.
- b. On March 11, 2020, the World Health Organization determined the outbreak constitutes a pandemic. On March 13, 2020, President Trump declared a national state of emergency as a result of the pandemic.
- c. On March 13, 2020, Governor Tim Walz declared a state of peacetime emergency to address the coronavirus pandemic in the State of Minnesota.
- d. The Minnesota Department of Health has provided specific guidance encouraging the limiting of events that do not allow social distancing of six feet per person, which is not practical to achieve in the meeting room.
- e. Minnesota Statutes, section 13D.021 authorizes governing bodies to meet by telephone or other electronic means in the case of a health pandemic or when an emergency has been declared if the presiding officer, chief legal counsel, or chief administrative officer determines meeting in person is not practical or prudent. The statute also allows these officers to determine it is not feasible to require any members or staff to be present in the meeting room during a meeting.
- f. Given the uncertainties associated with COVID-19 and its spread, conducting in-person meetings is not practical or prudent, and it is not feasible to require any member or staff to be present in the meeting room during the meetings. The Commission's goal is to slow the spread of COVID-19 and holding meetings via telephone and electronic means allows the Commission to accomplish this goal while still conducting the Commission's business.

Based on the above findings, I hereby determine and state as follows:

1. Until this statement is terminated due to the end of the pandemic or the Governor's emergency declaration, Commission meetings and, to the extent they are held, Technical Advisory Presiding Officer Statement

2. Committee meetings, shall be conducted by telephone or other electronic means in a manner satisfying the requirements of Minnesota Statutes, section 13D.021.
3. The meeting rooms will not be open to the public to attend the meetings.
4. Members, the chief legal counsel, and the chief administrative officer are not required to be present in the meeting room during meetings.
5. Before each meeting, notice will be provided regarding how the public may listen to or view meetings as they are being conducted.
6. All votes occurring at the meetings shall be conducted by roll call.

Dated this 30th day of March 2020.



Doug Baines, Chair

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April 1, 2020

Representatives
Elm Creek Watershed Management Commission
Hennepin County, MN

The meeting packet for this meeting may be found on the Commission's website:
<http://www.elmcreekwatershed.org/minutes--meeting-packets.html>

Dear Representatives:

A regular meeting of the Elm Creek Watershed Management Commission will be held on **Wednesday, April 8, 2020, at 11:30 a.m.** This will be a virtual meeting.

Until further notice, all meetings will be held online to reduce the spread of COVID-19. To join a meeting, click <https://zoom.us/j/990970201> or go to www.zoom.us and click **Join A Meeting**. The meeting ID is **990-970-201**.

If your computer is not equipped with audio capability, you need to dial into one of these numbers:

+1 929 205 6099 US (New York)
+1 669 900 6833 US (San Jose)
+1 253 215 8782 US

+1 312 626 6799 US (Chicago)
+1 346 248 7799 US (Houston)
+1 301 715 8592 US

The Technical Advisory Committee (TAC) will meet one hour prior to the regular meeting, at 10:30 a.m.

Meetings remain open to the public via the instructions above.

Please email me at judie@jass.biz to confirm whether you or your Alternate will be attending the TAC and the regular meetings.

Thank you.



Judie A. Anderson
Administrator
JAA:tim

Encls: Meeting Packet

cc:	Alternates	Jim Herbert	Joe Waln	James Kujawa	DNR
	TAC Members	Kris Guentzel	Brian Vlach	Diane Spector	BWSR
	City Clerks	Kirsten Barta	Met Council	Official Newspaper	MPCA

Z:\Elm Creek\Meetings\Meetings 2020\04 Notice_reg and TAC meetings.docx

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AGENDA Regular Meeting April 8, 2020

The meeting packet may be found on the Commission's website: <http://elm creek watershed.org/minutes--meeting-packets.html>

1. Call Regular Meeting to Order.
 - a. Approve Agenda.*
2. Consent Agenda.
 - a. Minutes last Meeting.*
 - b. Treasurer's Report and Claims.*
3. Open Forum.
4. Action Items.
 - a. Project Reviews – *see Staff Report.**
 - b. Amendment #1, Floodplain Modeling Grant Contract.*
5. Old Business.
6. New Business.
7. Communications. (*Also see Staff Report.**)
 - a. MTD Update.*
8. Education.
 - a. WMWA – next meeting is scheduled for April 14, 2020, at 8:30 a.m. This is a **virtual** meeting.
9. Grant Opportunities and Updates.

(over)

*in meeting packet
**available at meeting or on website

10. Project Reviews.

item 01a

Item No.	A	E	I R PFI	AR	Project No.	Project Name
			RP D			
					W Denotes wetland project	
ah.				AR	2014-015	Rogers Drive Extension, Rogers.
ai.				AR	2015-030	Kiddiegarten Child Care Center, Maple Grove.
aj.				AR	2016-002	The Markets at Rush Creek, Maple Grove.
ak.				AR	2016-005W	Ravinia Wetland Bank Plan, Corcoran.
al.				AR	2016-047	Hy-Vee North, Maple Grove.
am.				AR	2017-014	Laurel Creek, Rogers.
an.				AR	2017-029	Brayburn Trails, Dayton.
a.					2017-039	Rush Creek Apartments, Maple Grove.
b.					2017-050W	Ernie Mayers Wetland/floodplain violation, Corcoran.
c.					2018-020	North 101 Storage, Rogers.
ao.				AR	2018-026	Windrose, Maple Grove.
ap.				AR	2018-028	Tricare Third Addition, Maple Grove.
aq.				AR	2018-044	OSI Phase II, Medina.
d.					2018-046	Graco, Rogers
ar.				AR	2018-048	Faithbrook Church Phase 2, Dayton.
as.				AR	2019-001	Fernbrook View Apartments, Maple Grove.
at.				AR	2019-002	Parkside Villas, Champlin.
au.				AR	2019-021	Brenly Meadows, Rogers.
e.					2019-024	Boston Scientific, Maple Grove.
av.				AR	2019-027	Havenwood at Maple Grove.
f.					2019-030	Rolling Hills Acres, Corcoran.
g.			R		2019-031	Hassan Sand and Gravel Expansion, Rogers.
aw.				AR	2019-032	OSI Expansion, Medina.
h.					2020-001	Outlot L, Markets at Rush Creek, Maple Grove.
i.					2020-002	Project 100, Maple Grove.
j.			R		2020-003	Palisades at Nottingham Second Addn., Maple Grove.
k.	A	E			2020-004	Elm Road Area Project, Maple Grove.
l.		E	R		2020-005	Territorial Development Project EAW, Rogers.
m.	A	E			2020-006	Zachary Villas of Dayton
n.	A	E			2020-007	Pineview/Oakview Lanes North Improvements, Dayton.
o.		E			2020-008	Ione Gardens, Dayton.
p.					2020-009	Stetler Barn, Medina.

= Action item E = Enclosure provided I = Informational update will be provided at meeting R PFI - removed pending further information
R = Will be removed RP= Information will be provided in revised meeting packet..... D = Project is denied AR awaiting recordation

11. Other Business.

12. Adjournment.

Z:\Elm Creek\Meetings\Meetings 2020\04 Regular Meeting Agenda.docx

*in meeting packet
**available at meeting or on website

CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS

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Regular Meeting Minutes March 11, 2020

I. A regular meeting of the Elm Creek Watershed Management Commission was called to order at 11:32 a.m., Wednesday, March 11, 2020, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN, by Vice Chair Elizabeth Weir.

Present were: Gerry Butcher, Champlin; Ken Guenther, Corcoran; Elizabeth Weir, Medina; Catherine Cesnik, Plymouth; Kirsten Barta and Kris Guentzel, Hennepin County Dept. of Environment and Energy (HCEE); Brian Vlach, Three Rivers Park District (TRPD); Joe Waln, Barr Engineering; James Kujawa, Surface Water Solutions; and Judie Anderson, JASS.

Also present: Todd Tuominen, Champlin; Kevin Mattson, Corcoran; Nico Cantrero, Wenck Assocs., Dayton; Derek Asche and Mark Lahtinen, Maple Grove; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; James Fallon, USGS, for items 3.a. and 4.b; Nick Pederson, Katie Turpin-Nagel, and Ben Olson, Teal Lake Conservation Association, for items 3.b. and 4.c; Connie Fortin and Doug Klimbal, Fortin Consulting, for items 3.c. and 4.d; and Chad Luckhaus, Ryan Companies, for item III.F.1.

A. Motion by Guenther, second by Cesnik to approve the **agenda** as revised . * *Motion carried unanimously.*

B. Motion by Guenther, second by Cesnik to approve the **minutes*** of the February 12, 2020 regular meeting. *Motion carried unanimously.*

C. Motion by Guenther, second by Cesnik to approve the March **Treasurer's Report** and **Claims*** totaling \$66,131.61. *Motion carried unanimously.*

II. Open Forum.

A. Since 1976 Elm Creek has been monitored by a station located in the Elm Creek Park Reserve in Champlin and operated in cooperation with the United States Geological Survey (USGS). The exact location of the station is 33 feet downstream from the bridge on Elm Creek Road, 2.5 mi southwest of Champlin.

James Fallon is Data Chief, Minnesota portion of Upper Midwest Water Science Center, of the USGS. He gave a presentation of what has happened since the bridge was replaced at the monitoring site and how the creek flow has redeveloped as a result. He also showed how high the stream flows have been in southern Minnesota and the metro as well as the outlook for how they will continue to increase.

B. Members of the **Teal Lake Conservation Association** were present to describe their concerns about the water quality of their lake and their desire to monitor the lake through Metropolitan Council's CAMP program. Residents have noted a higher prevalence of weeds and that fish kills are occurring more frequently. They are looking to obtain water quality monitoring data to inform them what management efforts will be most effective in creating a healthy ecosystem.

RULE D - STORMWATER MANAGEMENT
RULE E - EROSION AND SEDIMENT CONTROL
RULE F - FLOODPLAIN ALTERATION

RULE G - WETLAND ALTERATION
RULE H - BRIDGE AND CULVERT CROSSINGS
RULE I - BUFFERS

CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS

elm creek Watershed Management Commission

Regular Meeting Minutes – March 11, 2020

Page 2

C. Fortin and Klimbal from Fortin Consulting described the upcoming **Salt Symposium** which will be held August 5, 2020, in Medina. The symposium will feature the latest research and technology relating to winter salt maintenance as well as offer alternative sessions on water softening, fertilizers and dust control. They are seeking sponsorship from the Commission.

III. Action Items.

A. Hearing no other nominations, motion by Guenthner, second by Butcher to elect the following slate of officers for 2020:

- | | |
|---|---|
| 1. Doug Baines, Dayton, Chair. | 2. Liz Weir, Medina, Vice Chair. |
| 3. Bill Walraven, Champlin, Secretary. | 4. Ken Guenthner, Corcoran, Treasurer. |

Motion carried unanimously.

B. Motion by Butcher, second by Guenthner to approve the WY2020 **USGS Cooperative Agreement**.* Total cost of the agreement is \$39,680, with the Commission's share being \$20,940. *Motion carried unanimously.*

C. Motion by Guenthner, second by Cesnik to approve the **2020 Citizen Assisted Monitoring Program (CAMP) Agreement*** with the Metropolitan Council. *Motion carried unanimously.* The members agreed that Teal Lake would be monitored in 2020.

D. Motion by Guenthner, second by Butcher to sponsor the **2020 Salt Symposium*** at the \$500 level, with funds taken from the Education budget. *Motion carried unanimously.*

E. Motion by Guenthner, second by Butcher to accept the **2020 Projected Work Plan**.* *Motion carried unanimously.*

F. Project Reviews.

1. 2020-002 Project 100, Maple Grove.* Ryan Companies is proposing to develop 100.6 acres of agricultural land into a mixed-use development consisting of office, medical, hospital, multi-family residential and senior living facilities. This site is situated between I-610 to the north, I-94 to the west and the Maple Grove Hospital to the east. The applicant is looking for approval of a regional stormwater management system to address the Commission's present-day requirements throughout the timeline for all the phases of this development. Additionally, they are requesting grading and erosion control approvals for Phase I of the development.

Phase I consists of mass grading approximately 35 acres in the southeast portion of the site. This will accommodate street and utilities, 383 parking stalls for the existing hospital and future building in this area. The Commission will be reviewing the concept plan for compliance with Rule D. In addition, it will review Phase I for compliance with Rules D, E, G and I. In their findings dated February 28, 2020,* Staff recommended:

Approval of Phase I site plans based on the following five conditions: (1) Feasibility to infiltrate stormwater in the filter bench areas of ponds 1 and 2 must be determined. If infiltration is considered feasible, design revisions and compliance with MPCA infiltration design criteria is required. (2) Pond 2 must meet Commission/NURP mean average depth requirement of 4.0'. (3) If the City of Maple Grove does not provide long term operation and maintenance on the stormwater facilities, an operation and maintenance plan and agreement must be approved by the City and the Commission and recorded on the land title. A copy of the recorded document must be provided to the Commission within 90 days of the final plat filing with Hennepin County. (4) City, MN WCA and Commission compliance on any wetland impacts must be adhered to. (5) SWPPP or erosion control plans must meet the Commission's standards.

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elm creek Watershed Management Commission

Regular Meeting Minutes – March 11, 2020

Page 3

Staff also recommended approval of concept site plans based on the following three conditions: (1) Overall stormwater management concept plan design meets the Commission's standards; (2) Feasibility to infiltrate stormwater in the future filter bench areas and biofiltration basins must be determined. If infiltration is considered feasible, design revisions and compliance with MPCA infiltration design criteria is required, and (3) Commission project review and approval are required when future site development triggers a review.

Motion by Guenther, second by Butcher to approve this project with the contingencies for Phase I site plans and the concept site plans as described above. *Motion carried unanimously.*

2. 2020-003 Palisades at Nottingham Second Addition, Maple Grove.* This is a 4.05-acre in-fill project in the Nottingham development section of Maple Grove. It is located at the 73rd Place/Xene Lane Cul-de-sac about one-quarter mile northeast of the intersection of Nottingham Parkway at Bass Lake Road. Nine new single-family residential lots are proposed creating 28,440 SF of new impervious areas. This review is for compliance to the Commission's Rules D, E and I. Staff's findings dated March 2, 2020, are included in this month's packet. Staff recommends approval, contingent upon: (1) Determination of infiltration capabilities, (2) Feasibility to infiltrate stormwater in the future filter bench areas must be determined. If infiltration is considered feasible, design revisions and compliance with MPCA infiltration design criteria is required and (3) Final erosion and sediment control approval by the Commission's technical advisor. Motion by Guenther, second by Cesnik to approve this project based on Staff's findings. *Motion carried unanimously.*

[Butcher departed 12:31 p.m.]

IV. Old Business.**V. New Business.****VI. Communications.**

A. Included in the meeting packet is a March 5, 2020 update* from Barr Engineering regarding **Manufactured Treatment Devices (MTDs)**. More information will be provided following today's scheduled work group meeting.

B. Elm Creek Floodplain Mapping. Heather Hlavaty, Barr Engineering, provided an update* on this project. It may be found in the March Staff Report. She estimates 35% of the budget has been expended to date.

VII. Education and Public Outreach.

A. Bassett Creek Watershed Management Commission sponsored a **Smart Salting workshop** at Plymouth City Hall on March 6, 2020. This is a free Level 1 MPCA Certification Course for parking lots and sidewalks. Because it was sold out a second workshop has been scheduled. [However, due to the COVID-19 pandemic, it has since been cancelled.]

B. WMWA. The **West Metro Water Alliance** met Tuesday, March 10, 2020, at Plymouth City Hall. The next meeting will be Tuesday, April 14, 2020, online.

1. Watershed PREP and Education and Outreach Events. Educators are in the midst of school visits for spring semester. Amy at JASS (amy@jass.biz) has the up-to-date schedule in the event anyone wishes to sit in on a classroom session. The educators are also available to table at city and school events. The educators, working with local cable provider CCX Media, filmed one of their classroom presen-

elm creek Watershed Management Commission

Regular Meeting Minutes – March 11, 2020

Page 4

tations and are preparing a short promotional video for Watershed PREP. The video should be available soon.

2. A sign maker has been identified to fabricate a lightweight tabletop **native plants roots display** and is in the process of developing a prototype. At least four entities including WMWA are interested in purchasing one for an estimated cost of \$2,200. The Blue Thumb roots display is one of the most popular items at events, but the current models are very heavy and difficult to transport.

3. **Upcoming events** include:

a. Plymouth is hosting another Winter Parking Lot and Sidewalk Maintenance workshop for Level I certification on March 27. [CANCELLED]

b. WMWA will table at the Discover Plymouth event on April 18 from 9 am – 2pm. [CANCELLED]

c. The Victory Neighborhood (Minneapolis) is hosting a Lawns to Legumes workshop on March 21. [CANCELLED]

d. Brooklyn Center will host a Shingle Creek Cleanup event on April 25. <https://www.cityofbrooklyncenter.org/index.aspx?NID=666>

4. **Website/Social Media.** Catherine Cesnik, the WMWA Coordinator, is refreshing the WMWA website and updating content. Any input is appreciated. westmetrowateralliance.org/. Cesnik has also taken over social media posting duties.

5. **Other.** Cesnik will be reaching out to member cities over the next few months, starting with the TAC representatives, to better understand how WMWA can be a resource and to help fill education and outreach gaps. The WMWA steering committee particularly discussed options to collaborate on the new or enhanced education and outreach requirements in the draft MN NPDES General Permit.

VIII. Grant Opportunities and Project Updates.

IX. Other Business.

A. The **projects** listed on the following page are discussed in the March Staff Report.

B. **Adjournment.** There being no further business, the meeting was adjourned at 12:50 p.m.

Respectfully submitted,



Judie A. Anderson
Recording Secretary
JAA:tim

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RULE D - STORMWATER MANAGEMENT
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CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS

elm creek Watershed Management Commission

Regular Meeting Minutes – March 11, 2020

Page 5

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Elm Creek Watershed Management Commission Treasurer's Report

		2020 Budget	Mar 2020	April 2020	2020 Budget YTD
EXPENSES					
Administrative		90,000	7,993.04	9,204.32	27,681.41
Watershed-wide TMDL Admin		300			0.00
Grant Writing		1,000			0.00
Website		3,000	245.40	134.80	461.45
Legal		2,000			31.00
Audit		5,000			0.00
Insurance		3,900	3,444.00		3,644.00
Miscellaneous/Contingency		1,000			0.00
Technical Support - HCEE		15,000			0.00
Floodplain Mapping 2019 HCEE					0.00
Floodplain Mapping 2019 Barr				1,441.00	0.00
Floodplain Mapping		39,360	26,051.00	7,560.50	33,611.50
Project Review Technical (Job 300)		185,000	8,354.00	5,987.50	14,341.50
Other Technical (Jobs 100 & 200)			10,567.00	6,714.00	17,281.00
Project Reviews - Admin		15,000	734.19	370.64	1,685.64
WCA - Technical		3,000			0.00
WCA - Legal		500			0.00
WCA - Admin		1,000			0.00
Stream Monitoring USGS		24,000			0.00
Stream Monitoring TRPD		7,200			0.00
DO Longitudinal Survey		1,000			0.00
TMDL Follow-up - TRPD		1,000			0.00
Rain Gauge		250	29.31	28.68	86.42
Rain Gauge Network		100			0.00
Lakes Monitoring - CAMP		760			0.00
Lakes Monitoring - TRPD					
Sentinel Lakes		8,100			0.00
Additional Lake		2,500			0.00
Aquatic Vegetation Surveys		1,100			0.00
Wetland Monitoring (WHEP)		4,000			0.00
Education		3,000	323.47	16.00	359.94
WMWA General Activities		5,000	3,000.00		3,000.00
WMWA Educators/Watershed Prep		4,500	2,000.00		2,000.00
WMWA Special Projects		2,000	1,000.00		1,000.00
Rain Garden Workshops/Intensive BMPs		3,000	625.00		625.00
Education Grants		1,000			0.00
Macroinvertebrate Monitoring-River Watch		3,000			0.00
Projects ineligible for ad valorem		0			0.00
Studies / Project ID / SWA		0		211.75	211.75
Plan Amendments		2,000			0.00
<i>Transfer to (from) Encumbered Funds (see below)</i>					0.00
<i>Transfer to (from) Capital Projects (see CIP Tr</i>		448,935			0.00
<i>Transfer to (from) Cash Sureties (see below)</i>			1,765.20		1,765.20
<i>Transfer to (from) Grants (see below)</i>		125,000	-	-	0.00
<i>To Fund Balance</i>					0.00
TOTAL - Month			66,131.61	31,669.19	107,785.81
TOTAL Paid in 2020, incl late 2019 Expenses		1,012,505.00	195,917.28	227,586.47	2020 Paid
				2019 Activity	

Elm Creek Watershed Management Commission Treasurer's Report

		2020 Budget	Mar 2020	April 2020	2020 Budget YTD
INCOME					
<i>From Fund Balance</i>					
Floodplain Modeling		39,360			
Project Review Fee		80,000	4,650.00		23,825.00
Return Project Fee					0.00
Water Monitoring - TRPD Co-op Agmt		5,500			0.00
WCA Fees		0			0.00
Return WCA Fee					0.00
Reimbursement for WCA Expense					0.00
WCA Escrow Earned					0.00
Member Dues		237,300			237,300.00
Interest/Dividends Earned		8,250	1,344.76		4,282.62
<i>Transfer to (from) Capital Projects (see CIP Tr</i>		448,935			0.00
<i>Transfer to (from) Cash Sureties (see below)</i>					
<i>Transfer to (from) Grants (see below)</i>		100,000	-	-	0.00
Misc Income					0.00
Total - Month			5,994.76	0.00	265,407.62
TOTAL Rec'd 2020, incl late 2019 Income		919,345.00	293,991.02	293,991.02	2020 Received
CASH SUMMARY		Balance Fwd			
Checking		0.00			
4M Fund		1,263,863.98	1,361,937.72	1,330,268.53	
Cash on Hand			1,361,937.72	1,330,268.53	
CASH SURETIES HELD		Balance Fwd			Activity 2020
WCA Escrows Received		11,494.47			0.00
WCA Escrow Reduced			1,765.20		2,351.20
Total Cash Sureties Held		11,494.47	9,143.27	9,143.27	
RESTRICTED / ENCUMBERED FUNDS		Balance Fwd			
<i>Restricted for CIPs</i>					0.00
<i>Enc. Studies / Project Identification / SWA</i>					0.00
Total Restricted / Encumbered Funds		0	0.00	0.00	
			Mar 2020	April 2020	2020 Budget YTD
GRANTS					
Fish Lake CWLA					
Revenue					-
Expense					-
Balance			-	-	-
Rush Creek SWA					
Revenue					-
Expense					-
Balance			-	-	-
BWSR Watershed-based Funding					
Revenue					-
Expense					-
Balance			-	-	-
TOTAL GRANTS					
Revenue			-	-	-
Expense			-	-	-
Balance			-	-	-

Elm Creek Watershed Management Commission Treasurer's Report

Claims Presented		General Ledger Account No	March	April	TOTAL
Campbell Knutson - Legal		521000			0.00
Connexus - Rain Gauge		551100		28.68	28.68
Barr Engineering					21,703.00
Floodplain Mapping		580440		9,001.50	
Project Review Technical (Job 300)		578050		5,987.50	
Other Technical (Jobs 100 & 200)		578050		6,714.00	
Ravinia Wetland Mitigation		240201			
JASS					9,937.51
Administration		511000		7,504.52	
TAC Support		511000		81.25	
Annual Report		511000		1,441.40	
Website		581000		134.80	
Project Reviews		578100		370.64	
WCA		579000			
WCA Reimbursable Ravinia		240201			
Plan Amendment		541500			
Education		590000		16.00	
CIPs General		563001		211.75	
Floodplain Mapping Admin		511000		177.15	
TOTAL CLAIMS					31,669.19



Monthly Statement

Service Address
ELM CREEK RD
DAYTON MN

Billing Summary

Billing Date: Mar 17, 2020

Previous Balance	\$29.31
Payments - Thank You!	\$29.31
Balance Forward	\$0.00
New Charges	\$28.68

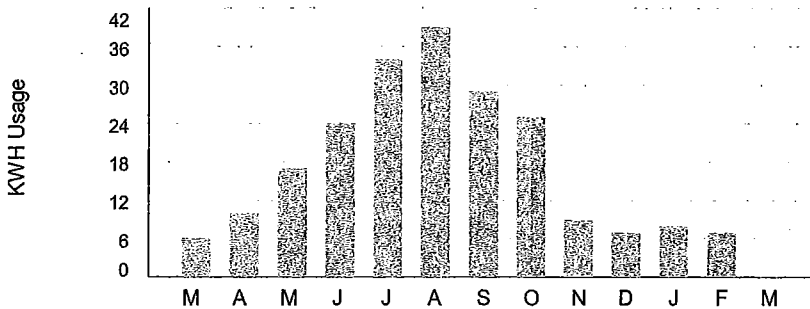
Total Amount Due **\$28.68**

Payment must be received on or before April 13, 2020

Energy Comparison

Previous Months' Usage

Current Month's Usage



How to contact us

Member Services / Moving - 763-323-2650
Outages and Emergencies - 763-323-2660
Hearing/Speech Impaired Call - 711 or 800-627-3529
Email: info@connexusenergy.com
www.connexusenergy.com
Gopher State One Call - 811
14601 Ramsey Boulevard, Ramsey, MN 55303

Account Number:
481113-238425

item 02b

ELM CREEK WATERSHED MGMT ORG

Total Amount Due

\$28.68

Due Date

April 13, 2020

Message Center

Watch for your voting packet in the mail

As a member of our cooperative, you have a vote in our annual elections. Your vote determines who serves on the Connexus Energy Board of Directors. Voting packets will be mailed in late March. Election results will be announced at the Annual Meeting on April 16.

Chance to win an electric lawn mower

All members who vote online in the Board of Directors election are automatically entered in a drawing to win an electric lawn mower.

FREE Wi-Fi Thermostat

We are offering free Honeywell wi-fi thermostats and free installation. To qualify, you need to enroll in our Wi-Fi PowerNap® Air Conditioning program. Get all the details at connexusenergy.com.

▼ Please detach at perforation and return this portion with a check or money order made payable to Connexus Energy ▼

TRA3-D-007390/006971 AGY1QY S1-ET-M1-C00002 1



Account Number:

481113-238425

Total Amount Due

\$28.68

Payment Due By

April 13, 2020

007390 1 AB 0.416 003393/007390/006971 027 02 AGY1QY
ELM CREEK WATERSHED MGMT ORG
3235 FERNBROOK LN N
PLYMOUTH MN 55447-5325



Connexus Energy
PO Box 1808
Minneapolis, MN 55480-1808

00002868 0004811130238425 000000 00000 000000000000 0000007



INVOICE

Barr Engineering Co.
 4300 MarketPointe Drive, Suite 200
 Minneapolis, MN 55435
 Phone: 952-832-2600; Fax: 952-832-2601
 FEIN #: 41-0905995 Inc: 1966

Ms. Judie Anderson
 Elm Creek Watershed Management
 10801 Wayzata Boulevard
 Minnetonka, MN 55305

March 27, 2020

Invoice No: 23270F55.20 - 2

Total this Invoice	\$12,701.50
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Regarding: Review of development permits for compliance with the Elm Creek Watershed Management Plan

This invoice is for professional services, which include the following:

Job 100

- Technical Services
- TAC and WMC meeting attendance
- Pre-Project Review
- Wetland Issues – Revina Wetland Monitoring
- General administrative tasks (invoicing, project setup)

Job 200 – Other Assistance

- MTDs – review technical submittal, task group participation

Job 300 – Project Reviews

- 2019-026 Interstate Power Systems
- 2020-002 Project 100
- 2020-003 Palisades at Nottingham, Maple Grove
- 2020-004 Elm Road Area, Maple Grove
- 2020-005 Territorial Development, Rogers
- 2020-006 Zachary Villas of Dayton
- 2020-007 Pineview Oakview Lane, Dayton
- 2020-008 Lone Gardens, Dayton

Professional Services from February 22, 2020 to March 20, 2020

Job: 100 Technical Services

Labor Charges

	Hours	Rate	Amount
Principal			
Herbert, James	7.50	200.00	1,500.00
Engineer / Scientist / Specialist IV			
Waln, Joseph	9.10	155.00	1,410.50
Engineer / Scientist / Specialist III			
Wold, Karen	6.70	135.00	904.50
Support Personnel II			
Nypan, Nyssa	.80	95.00	76.00
	24.10		3,891.00
Subtotal Labor			3,891.00

PLEASE REMIT TO ABOVE ADDRESS and INCLUDE INVOICE NUMBER ON CHECK.

Terms: Due upon receipt. 1 1/2% per month after 30 days. Please refer to the contract if other terms apply.

Subconsultant Charges

Subconsultants	1,650.00	
Subtotal Subconsultant		1,650.00

Expense Charges

Travel				
3/11/2020	Waln, Joseph	Mileage	35.65	
	Subtotal Expenses			35.65
		Job Subtotal		\$5,576.65

Job: 200 Other Assistance

Task: 001 MTDs

Labor Charges

	Hours	Rate	Amount	
Principal				
Herbert, James	4.90	200.00	980.00	
Engineer / Scientist / Specialist II				
Phillips, Josh	1.40	105.00	147.00	
	6.30		1,127.00	
	Subtotal Labor			1,127.00

Expense Charges

Travel				
3/2/2020	Herbert, James	Mileage	10.35	
	Subtotal Expenses			10.35
		Task Subtotal		\$1,137.35
		Job Subtotal		\$1,137.35

Job: 300 Project Reviews

Labor Charges

	Hours	Rate	Amount	
Principal				
Herbert, James	.70	200.00	140.00	
Engineer / Scientist / Specialist IV				
Waln, Joseph	17.50	155.00	2,712.50	
	18.20		2,852.50	
	Subtotal Labor			2,852.50

Subconsultant Charges

Subconsultants	3,135.00	
Subtotal Subconsultant		3,135.00
	Job Subtotal	\$5,987.50

Total this Invoice \$12,701.50

	Current	Prior	Total	Received	A/R Balance
Invoiced to Date	12,701.50	18,921.00	31,622.50	18,921.00	12,701.50

Thank you in advance for the prompt processing of this invoice. If you have any questions, please contact Joe Waln, your Barr project manager at 952.832.2984 or email at jwaln@barr.com.



INVOICE

Barr Engineering Co.
 4300 MarketPointe Drive, Suite 200
 Minneapolis, MN 55435
 Phone: 952-832-2600; Fax: 952-832-2601
 FEIN #: 41-0905995 Inc: 1966

Ms. Judie Anderson
 Elm Creek Watershed Management
 10801 Wayzata Boulevard
 Minnetonka, MN 55305

March 27, 2020

Invoice No: 23271759.00 - 4

Total this Invoice	\$7,560.50
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Regarding: Elm Creek Floodplain Mapping

This invoice is for professional services, which include the following:

- Finalize calibration of HEC-HMS hydrology model
- Memo of draft HMS model and results
- Submittal of draft HMS model to DNR
- Identify stream centerlines for hydraulic model
- Identification of survey needs for hydraulic model

Total Contract Budget	Total Prior Billing	Billing this Invoice	Total Billing to Date	Budget Remaining
\$90,945.00	\$28,024.50	\$7,560.50	\$35,585.00	\$55,360.00

Professional Services from February 22, 2020 to March 20, 2020

Job: 100 Meetings

Labor Charges

	Hours	Rate	Amount
Principal			
Campeau, Nathan	.30	170.00	51.00
Herbert, James	1.50	200.00	300.00
Engineer / Scientist / Specialist IV			
Waln, Joseph	1.50	155.00	232.50
Support Personnel II			
Nypan, Nyssa	.80	95.00	76.00
Support Personnel I			
Rasmussen, Kayla	.10	75.00	7.50
	4.20		667.00
Subtotal Labor			667.00
		Job Subtotal	\$667.00

Job: 200 Data Collection and Organization

PLEASE REMIT TO ABOVE ADDRESS and INCLUDE INVOICE NUMBER ON CHECK.

Terms: Due upon receipt. 1 1/2% per month after 30 days. Please refer to the contract if other terms apply.

Labor Charges

	Hours	Rate	Amount
Principal			
Campeau, Nathan	.20	170.00	34.00
	.20		34.00
Subtotal Labor			34.00
		Job Subtotal	\$34.00

Job: 300 Survey Locations and Identification

Labor Charges

	Hours	Rate	Amount
Engineer / Scientist / Specialist II			
Vecchi, Anthony	1.00	100.00	100.00
	1.00		100.00
Subtotal Labor			100.00
		Job Subtotal	\$100.00

Job: 400 Hydrologic Analysis

Labor Charges

	Hours	Rate	Amount
Engineer / Scientist / Specialist IV			
Waln, Joseph	.80	155.00	124.00
Engineer / Scientist / Specialist II			
Baker, Kimberly	4.00	105.00	420.00
Comben, Matthew	9.00	110.00	990.00
Hlavaty, Heather	2.20	110.00	242.00
Mullen, Ross	.80	120.00	96.00
Vecchi, Anthony	39.00	100.00	3,900.00
	55.80		5,772.00
Subtotal Labor			5,772.00
		Job Subtotal	\$5,772.00

Job: 500 Hydraulic Modeling - Detailed Studies

Labor Charges

	Hours	Rate	Amount
Engineer / Scientist / Specialist IV			
Waln, Joseph	.30	155.00	46.50
Engineer / Scientist / Specialist II			
Hlavaty, Heather	2.70	110.00	297.00
Mullen, Ross	.80	120.00	96.00
Vecchi, Anthony	.60	100.00	60.00
Engineer / Scientist / Specialist I			
Anderson, Edward	3.90	90.00	351.00
	8.30		850.50
Subtotal Labor			850.50
		Job Subtotal	\$850.50

Project	23271759.00	Elm Creek Floodplain Mapping	Invoice	Item 02b 4
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Job: 600 Hydraulic Analysis - Non Detailed

Labor Charges

	Hours	Rate	Amount	
Engineer / Scientist / Specialist II				
Vecchi, Anthony	.20	100.00	20.00	
Engineer / Scientist / Specialist I				
Anderson, Edward	1.30	90.00	117.00	
	1.50		137.00	
Subtotal Labor				137.00
		Job Subtotal		\$137.00
		Total this Invoice		\$7,560.50

	Current	Prior	Total	Received	A/R Balance
Invoiced to Date	7,560.50	28,024.50	35,585.00	26,583.50	9,001.50

Outstanding Invoices

Invoice	Date	Balance
1	12/20/2019	1,441.00
Total		1,441.00

Thank you in advance for your prompt processing of this invoice. If you have any questions, please contact Heather Hlavaty, your Barr project manager at 952.842.3613 or email at hhlavaty@barr.com.



INVOICE

Barr Engineering Co.
4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435
Phone: 952-832-2600; Fax: 952-832-2601
FEIN #: 41-0905995 Inc: 1966

Ms. Judie Anderson
 Elm Creek Watershed Management
 Suite
 10801 Wayzata Boulevard
 Minnetonka, MN 55305

December 20, 2019

Invoice No: 23271759.00 - 1

Total this Invoice	\$1,441.00
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Regarding: Elm Creek Floodplain Mapping

This invoice is for professional services, which include the following:

- Kick-off meeting with MN DNR
- Internal meeting to discuss project schedule and work flow

Professional Services from November 2, 2019 to November 29, 2019

Job: 100 Meetings

Labor Charges

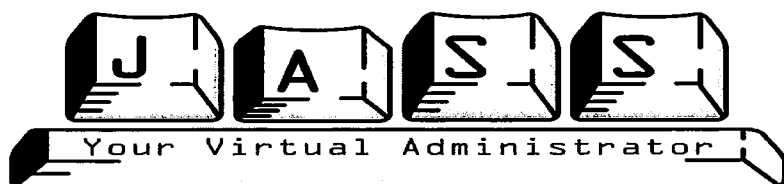
	Hours	Amount
Principal		
Campeau, Nathan	2.30	
Engineer / Scientist / Specialist III		
Waln, Joseph	2.80	
Weiss, Jeffrey	3.60	
Engineer / Scientist / Specialist II		
Hlavaty, Heather	1.00	
Support Personnel II		
Nypan, Nyssa	.50	
Support Personnel I		
Seelen, Curtis	.30	
	10.50	
Subtotal Labor		1,441.00
		Job Subtotal
		\$1,441.00
		Total this Invoice
		\$1,441.00

	Current	Prior	Total	Received	A/R Balance
Invoiced to Date	1,441.00	0.00	1,441.00	0.00	1,441.00

Thank you in advance for your prompt processing of this invoice. If you have any questions, please contact your Barr Project Manager, Jeff Weiss, Phone: 952-832-2706 or E-Mail: jweiss@barr.com.

PLEASE REMIT TO ABOVE ADDRESS and INCLUDE INVOICE NUMBER ON CHECK.

Terms: Due upon receipt. 1 1/2% per month after 30 days. Please refer to the contract if other terms apply.



3235 Fernbrook Lane
Plymouth MN 55447

Elm Creek Watershed Management Commission
3235 Fernbrook Lane
Plymouth, MN 55447

1-Apr-20

Total by
Project Area

Administrative	3.25	60.00	195.00	
Administrative	65.88	65.00	4,282.20	
Admin - Offsite	3.67	70.00	256.90	
Office Support	10.00	200.00	2,000.00	
Storage Unit	1.00	134.42	134.42	
Data Processing/File Mgmt		60.00	0.00	
File Management		60.00	0.00	
Archiving		60.00	0.00	
Admin - Reimbursable Expense	636.00	1.00	636.00	7,504.520
Admin - TAC support		60.00	0.00	
Admin - TAC support	1.25	65.00	81.25	
Admin - TAC support offsite		70.00	0.00	
TAC Support - Reimbursable Expense		1.00	0.00	81.250
Website	1.25	60.00	75.00	
Website	0.42	65.00	27.30	
Website - Zoom	32.50	1.00	32.50	
Website - Reimbursable Expense		1.00	0.00	
Web Domain, hosting		1.00	0.00	134.800
Annual Reporting/Work Plans		60.00	0.00	
Annual Reporting/Work Plans	21.01	65.00	1,365.65	
Annual Reporting - Reimbursable Expense	75.75	1.00	75.75	1,441.400
Project Reviews - Secre		60.00	0.00	
Project Reviews - Admin	2.76	65.00	179.40	
Project Reviews - Admin offsite		70.00	0.00	
Project Reviews - Admin - File Mgmt		55.00	0.00	
Project Reviews - Reimbursable Expense	191.24	1.00	191.24	370.640
Education - Secretarial		60.00	0.00	
Education - Admin		65.00	0.00	
Education - Admin Offsite - Blue Thumb Partner Event		70.00	0.00	
Education - Reimbursable Expense	16.00	1.00	16.00	16.000
CIPs - General - Secretarial		60.00	0.00	
CIPs - Administrative	3.25	65.00	211.25	
CIPs- Offsite Admin		70.00	0.00	
CIPs - reimbursables	0.50	1.00	0.50	211.750
Floodplain administrative	2.61	65.00	169.65	
Floodplain mapping reimbursable expense	7.50	1.00	7.50	177.150
Invoice Total				9,937.510

elm creek

Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
email: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Barr Engineering
4300 Market Point Drive, Suite 200
Minneapolis, MN 55435
PH: 612.834.1060
email: jherbert@barr.com

STAFF REPORT

April 1, 2020

a. 2017-039 Rush Creek Apartments, Maple Grove. This project is located in the southwest quadrant of the intersection of Bass Lake Road (CSAH 10) and Troy Lane (CSAH 101). The project area is 8.2 acres in size and includes two phases of construction. Phase I is 236 apartment units located on 6.0 acres; Phase II is a future 76-unit apartment building located on 2.2 acres in Outlot C of this development. The Commission is reviewing this project for conformance to Rules D, E and I. Findings with no recommendations dated November 15, 2017, were provided to the applicant and the City. The applicant requested and was granted an extension of the deadline per MN statute 15.99 to December 31, 2019. A new layout and project application were submitted to Maple Grove in January 2019 and the project is still considered active by the City. Staff extended the deadline on this project to December 31, 2020.

b. 2017-050W Ernie Mayers Wetland/floodplain violation, Corcoran. The City of Corcoran contacted the Commission in December 2017 concerning drainage complaints on Mayers' property. Technical Evaluation Panels (TEPs) were held in 2017 and 2018 to assess the nature and extent of the violations and a restoration order was issued to Mayers. On October 30, 2018, an appeal of the restoration order was received by BWSR. BWSR issued an order of abeyance (stay) on the appeal until April 1, 2019. An application for a replacement plan was received from Mayers on January 29, 2019. It addresses the wetland fill (4:1 replacement request) and drain tile (disable existing tile) impacts, but requests additional time to submit an application to address the ditch (WCA jurisdiction) and floodplain (Commission jurisdiction) impacts. A TEP was held February 28, 2019 to address the replacement plan and provide guidance to the LGU.

The City of Corcoran assumed WCA LGU responsibilities for this project on March 1, 2019. Corcoran and BWSR have extended the decision process to July 30, 2019. An updated replacement plan was received by the City on July 24, 2019. A TEP was held August 13 to discuss the plan. Corcoran extended the deadline for their decision to November 21, 2019. A new no-loss and replacement plan was received by the LGU on November 14, 2019. The TEP recommended and the LGU denied the application. Mayers appealed the decision. A TEP was held January 30, 2020 to discuss possible resolutions to the appeal. As of this update, no solution has been obtained.

c. 2018-020 North 101 Storage, Rogers. This is an existing 3-acre lot in the northwest corner of Highway 101 and CR144. The current land use is a combination of mini-storage units and outdoor storage. The site is proposed for complete demolition and construction of seven new mini-storage buildings. At their July meeting the Commission approved Staff findings dated July 9, 2018, pending four items relating to abstraction requirements and the infiltration system. The applicant requested and was granted an extension to December 31, 2020, provided the review process with the City of Rogers does not expire.

d. 2018-046 Graco Expansion, Rogers. This project is the expansion of an existing building. The site is located in an area that has regional ponding provided for rate control purposes, but needs to account for water quality and abstraction requirements on site prior to discharging offsite as part of the improvements. The Com-

RULE D - STORMWATER MANAGEMENT
RULE E - EROSION AND SEDIMENT CONTROL
RULE F - FLOODPLAIN ALTERATION

RULE G - WETLAND ALTERATION
RULE H - BRIDGE AND CULVERT CROSSINGS
RULE I - BUFFERS

Italics indicates new information

indicates enclosure

mission granted conditional approval at their October meeting. Conditions of approval were to submit a SWPPP plan meeting requirements, clarify maintenance responsibilities for the iron enhanced sand filter, and a letter from the City of Rogers stating their intentions to provide the water quality deficit in an upcoming project. Staff confirmed several minor plan revisions remain in conformance with the original approval. This item will remain on the Staff report until such time as the water quality deficit has been made up.

e. 2019-024 Boston Scientific Weaver Lake Road, Building 2 East Addition, Maple Grove. Boston Scientific is building an addition on the east side of Building 2 to provide more production and office space for their existing facility. The project includes moving the existing service drive and site utilities on the east side of Building 2 to the east within the BS property to create space for the building addition. About 1.9 acres of the site will be disturbed and 1.06 acres of impervious surface will be added. This project was reviewed for compliance to Rules D, E, F, and I. Based on Staff findings dated September 11, 2019, at their September 11, 2019 meeting the Commission approved the project contingent upon: (1) a site plan that provides the irrigation areas to be irrigated by the new system and (2) an operation and maintenance plan for the irrigation system approved by the City and the Commission and recorded on the land title. The applicant and their engineer are pursuing overall stormwater management alternatives for this project and potential future projects. Updates will be provided to the Commission when the applicant resolves how they would like to proceed. *No new information has been received.*

f. 2019-030 Rolling Hills Acres, Corcoran. This is a 40.8-acre rural agriculture parcel located a mile north of Highway 55 on the east side of Rolling Hills Road. There is an existing home site in the far southwest corner of the parcel. The project proposes to subdivide the property into four large single-family lots ranging from 6.9 acres to 12.7 acres in size. The project will create approximately 0.5 acres of new impervious area. There are wetlands and floodplains on this site. The site plan triggers the Commission's review for conformance to Rules E, I, and F. Because there are no grading or floodplain impacts proposed, Staff approved this project contingent upon: (1) A planting plan of native vegetation being developed for the wetland buffer areas that are not in permanent vegetation at this time, and (2) A permanent vegetation cover plan being developed to control erosion and sedimentation on this site. *No new information has been received.*

g. 2019-031 Hassan Sand and Gravel Expansion, Rogers. The applicant is proposing to open a new mining operation just north and west of their existing site on CR 144 and Willandale Road. The Crow River runs along the northerly boundary of this property. Approximately 38 acres of the land will be mined in phases over the next 5-10 years, depending on demand. The site plans propose to stay out of the bluff and setback zones along the river. During the mining operations runoff will be directed north into a sediment pond. From there the water runs approximately one-half mile north on a flat grade before entering the Crow River. The site plan triggers the Commission's Rules E, F, D, and I. *At their February 2020 meeting the Commission approved this project with the following four conditions: (1) WCA requirements must be met. The City consults with the WCA Technical Evaluation Panel to determine if there are impacts to Wetland A during the mining operations; (2) The City establishes a pre-development runoff rate standard for the 2, 10- and 100-year storm event for the existing discharge points from this site; (3) Before final restoration site work begins, the City require site plans that will provide equal to or less than pre-development flows; and (4) The site abides by all MPCA NPDES Nonmetallic mining activities General Permit Conditions. All conditions have been agreed to or completed by the City. This item will be removed from the report.*

h. 2020-001 Outlot L, Markets at Rush Creek, Maple Grove. Outlot L is a 1.55-acre lot located in The Markets at Rush Creek (Hy-Vee South) PUD development. This project is located just west of the Hy-Vee gas

station and south of CR10. A 12,000 SF multi-tenant building and associated parking is proposed for this site. Stormwater management for this lot is part of the regional stormwater system approved by the Commission for project 2016-002. Commission rules require compliance with Rules D and E.. On January 23, 2020, Staff administratively approved this project contingent upon receipt of a dated and signed set of the final development stage plans. *This information has not been received.*

i. 2020-002 Project 100, Maple Grove. Ryan Companies is proposing to develop 100.6 acres of agricultural land into a mixed-use development consisting of office, medical, hospital, multi-family residential and senior living facilities. This site is situated between I-610 to the north, I-94 to the west and the Maple Grove Hospital to the east. The applicant is looking for approval of a regional stormwater management system to address the Commission's present-day requirements throughout the timeline for all the phases of this development. Additionally, they are requesting grading and erosion control approvals for Phase I of the development. Phase I consists of mass grading of approximately 35 acres in the southeast portion of the site. This will accommodate street and utilities, 383 parking stalls for the existing hospital and future building in this area. The Commission will be reviewing the concept plan for compliance with Rule D. In addition, it will review Phase I for compliance with Rules D, E, G and I. At their March 2020 meeting the Commission approved this project contingent upon the following conditions: Phase I site plans: (1) Feasibility to infiltrate stormwater in the filter bench areas of ponds 1 and 2 must be determined. If infiltration is considered feasible, design revisions and compliance with MPCA infiltration design criteria is required and (2) City, MN WCA and Commission compliance on any wetland impacts must be adhered to.

Concept Site Plans: The overall stormwater management concept plan design meets the Commission's standards provided. (1) Feasibility to infiltrate stormwater in the future filter bench areas and biofiltration basins is determined. If infiltration is considered feasible, design revisions and compliance with MPCA infiltration design criteria is required. (2) Commission Project review and approval are required when future site development triggers a review.

For Phase I and the Concept Plans: 1) The Commission recommends the management of stormwater runoff to minimize the impacts of the application of chloride compounds on water resources by minimizing their use on roads, parking lots, sidewalks and other impervious surfaces. Toward that end, the Commission requests that existing and future landowners develop and implement a chloride management plan on all private parking and walking areas within this project to minimize chloride runoff into surface water on site. The primary element of such a plan is implementation and application of salt to these surfaces by an applicator with MPCA Level 1 Certification in Snow & Ice Control Best Practices.

j. 2020-003 Palisades at Nottingham Second Addition, Maple Grove. This is a 4.05 acre in-fill project in the Nottingham development section of Maple Grove. It is located at the 73rd Place/Xene Lane Cul-de-sac about one-quarter mile northeast of the intersection of Nottingham Parkway at Bass Lake Road. Nine new single-family residential lots are proposed, creating 28,440 SF of new impervious areas. This review is for compliance with the Commission's Rules D, E and I. At their March 2020 meeting the Commission approved the site plans contingent upon final erosion and sediment control plans being approved by the Commission's technical advisor. *Site plans received March 17, 2020 from the applicant meet the Commissions approval requiremnts and were granted final approval. This item will be removed form the report.*

k. 2020-004 Elm Road Area Project, Maple Grove. This is approximately 53 acres consisting of nine large residential parcels proposed to be developed into 106 single-family residential lots. It is located along Elm Road near the border of Plymouth. *Updated plans were received on March 26, 2020, and are*

RULE D - STORMWATER MANAGEMENT
 RULE E - EROSION AND SEDIMENT CONTROL
 RULE F - FLOODPLAIN ALTERATION

RULE G - WETLAND ALTERATION
 RULE H - BRIDGE AND CULVERT CROSSINGS
 RULE I - BUFFERS

Italics indicates new information

indicates enclosure

being reviewed at the time of this update. If available, findings and a recommendation will be provided to the Commission for their decision.

l. 2020-005 Territorial Road EAW, Rogers. This is a statutory EAW review. It is located on the north and south sides of CR 116 just west of its intersection with Tilton Trail. Lennar Corporation is proposing to construct a residential development on 148.5 acres. The project includes 190 single-family units of three models, 48 twin home units, and 124 townhome units of two sizes for a total of 362 units. Construction will also include stormwater infrastructure, internal roads, and utilities. *Comments covering the Commission's plan review requirements and standards based on the 3rd Generation Stormwater Management Plan were provided to the City This item will be removed from the report.*

m. 2020-006 Zachary Villas of Dayton, Dayton. This project consists of three parcels that total 5.74 acres located just south of Diamond Lake Road on the border with Champlin. Fourteen (14) single family residential lots are proposed. Staff reviewed it for compliance to the Commission's 3rd Generation Stormwater Management Plan, Appendix C, Rules D and E. *Action recommended is for approval. Staff findings and recommendations are provided in this month's packet.*

n. 2020-007 Pineview and Oakview Lanes North Improvements, Dayton. The City of Dayton proposes to reconstruct and make improvements to Pineview and Oakview Lanes North and part of CSAH 121 due to an increase in traffic volume. *Proposed improvements include a roundabout at the intersection of Pineview Lane and CSAH 121, installation of a multiuse trail along the west side of Pineview Lane, and general street construction, utility, and drainage improvements on Pineview and Oakview Lanes. The total new impervious areas on this project will be 1.92 acres. The Commission's standards require approval of linear projects that create one or more acre of new impervious surface. This review is for compliance to Rules F, D, and E. Action recommended is: (1) approval contingent upon wetland alterations meeting MN WCA and LGU requirements.*

o. 2020-008 Ione Gardens, Dayton. This project is located at the northwest intersection of CSAH 144 (Diamond Lake North) and 12 (Dayton River Road). The site is three agricultural properties totaling 48.29 acres in size. 112 new single-family residential lots creating 16.84 acres of new impervious surface areas are proposed for this development. The Commission's review will be for compliance to Rules D, E, G, and I. *Initial findings are provided in this month's packet. No recommendations are given at this time.*

p. 2020-009 Stetler Barn, Medina. This site disturbs approximately 3.5 acres. Anything over 1.0 acres of site disturbance triggers a Commission project review. It will need to meet Rules D, E, and I. *Because of the limited available space for pasture, paddocks and land application of manure, understanding how these components will be managed will also be an important part of the review. As of this update there is no recommendation from Staff. This project is still considered incomplete because a complete stormwater management plan has not been received.*

FINAL RECORDINGS OR OTHER DOCUMENTATION ARE DUE ON THE FOLLOWING PROJECTS: *(Staff reached out to the cities for updates on these projects on March 4, 2020.)*

ah. 2014-015 Rogers Drive Extension, Rogers. This project involves improvements along Rogers Drive from Vevea Lane to Brockton Lane. The project is located east of I-94, south of the Cabela development. The total project area is 8.0 acres; proposed impervious surfaces total 5.6 acres. Site plans received July 1, 2014 met the requirements of the Commission with the exception of the nutrient control. The Commission approved the site plan contingent upon the City deferring 4.6 lbs. of phosphorus for treatment in future ponding opportunities as the easterly corridor of Rogers Drive develops. 2.3 lbs. will be accounted for in the Kinghorn Spec. Building site plan, with 2.3 lbs. still outstanding. This item will remain on the report until the total deferral is accounted for.

ai. 2015-030 Kiddiegarten Child Care Center, Maple Grove. Approved December 9, 2015. If the City does not take over the operation and maintenance of the underground system and the sump catch basins, an O&M agreement for the underground trench/pond system must be approved by the Commission and the City and recorded with the title. On February 5, 2019 Derek Asche contacted the owner requesting a copy of the recorded maintenance agreement. No update was available on July 2, 2019.

aj. 2016-002 The Markets at Rush Creek, Maple Grove. This is a proposal to develop 40 acres of a 123-acre PUD located in the southwest quadrant of the intersection of CSAH 101 and CSAH 10. In 2016 the Commission granted Staff authority to administratively approve the project and report any updates. Updated plans with some minor layout revisions were reviewed by Staff and administratively approved on July 24, 2018, contingent upon the Operation Manager requesting a copy of the recorded maintenance agreement. *On March 4, 2020, Derek Asche reported that the agreement has been signed but not yet recorded. The City will have the document recorded to satisfy the final condition of this project.*

ak. 2016-005W Ravinia Wetland Replacement Plan, Corcoran. In December 2016 the Commission approved Staff's recommendations on this wetland replacement plan. Final wetland impacts are 1.22 acres. Wetland credits created on site will be 4.01 acres. Excess credits of 0.75 acres are proposed to be used on Lennar's Laurel Creek development in Rogers (2017-014). All approval contingencies have been met and construction is completed.. Vegetation planting and management took place throughout 2017. Barr Engineering is providing monitoring to ensure the replacement meets the performance standards of the approved plans. Their first annual report was submitted to the US Army Corps of Engineers on February 7, 2019. Kevin Mattson indicated on October 2, 2019 that no further updates are available.

al. 2016-047 Hy-Vee North Maple Grove. The applicant is proposing to disturb 13 acres of a 20.4-acre site located at the northeast corner of Maple Grove Parkway and 99th Avenue for the purpose of constructing a grocery store, fuel station, convenience store and parking facilities. In findings dated January 10, 2017, Staff recommended approval of this project subject to three conditions. The Commission approved Staff's recommendations at their January 2017 meeting with the additional requirement that the Commission receive and comment on a WCA impact notice. (Also see Project 2019-023 99th Avenue Apartments. That project is part of this PUD and had the same requirements prior to approval.) *WCA, Buffer easement protection and updated grading plans were received and approved by the Commission in February 2017. As of this update, the final outstanding item is the operation and maintenance agreement.*

am. 2017-014 Laurel Creek, Rogers. In June 2017 the Commission approved this project with four conditions. All contingency items have been provided with the exception of the O&M agreement which is being negotiated by the City as to whether the City or the HOA will be responsible for the operation and maintenance of the stormwater management facility. On August 31, 2017, Andrew Simmons responded that the O&M agreement is still being negotiated.

an. 2017-029 Brayburn Trails, Dayton. At their August 2017 meeting the Commission approved Staff's findings dated August 2, 2017 with five conditions. All of the conditions have been met except for the final recordings of the O&M agreements and easements. On March 7, 2018, the City reported: final plat approval has not been granted, easements will be recorded as plats are approved. Ponds will be maintained by the City of Dayton. An agreement, and additional easement, will

RULE D - STORMWATER MANAGEMENT
 RULE E - EROSION AND SEDIMENT CONTROL
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RULE G - WETLAND ALTERATION
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 RULE I - BUFFERS

Italics indicates new information

indicates enclosure

be required for a water re-use system within one of the ponds (between the City and HOA). This system is not part of the first addition – the timing of said improvements/agreement is unknown. Construction was expected to start in 2018.

On February 7, 2019, Jason Quisberg provided the following information: The 1st Addition was scaled back from what was proposed; associated construction activity is significantly completed. Extension of trunk utilities through Sundance Golf Course are complete. The proposed 2nd Addition is under review. Improvements to 117th Avenue (East French Lake Road to Fernbrook Lane) will be part of the work done with the 2nd Addition. Construction is anticipated to start spring 2019. Pond easements are being recorded with the platting process for each addition (those [that are] part of the 1st Addition are in place). The water re-use system is not part of the 2nd Addition (will be with future additions).

ao. 2018-026 Windrose, Maple Grove. The Commission approved Staff's finding and recommendations dated July 20, 2018. Final plan approval is contingent upon verification of the wetland approvals by the City and the approval and recording of the operation and maintenance plan on the filter basins. On February 5, 2019 Derek Asche reported that the City will receive the agreement for the filter basins with the grading permit application.

ap. 2018-028 Tricare Third Addition, Maple Grove In their findings dated August 7, 2018, Staff recommended approval contingent on approval and recordation of the O&M plan on the filter basins. The Commission further recommended that the City consider an oil/debris type of separator in the parking lot manhole. It is a condition of the grading permit that the maintenance agreement is provided. No update was available on July 2, 2019.

aq. 2018-044 OSI Phase II, Medina. Staff findings dated October 9, 2018 were approved by the Commission at their October meeting contingent upon receipt of an approved stormwater system O&M plan being recorded on the property title. On October 2, 2019 Dusty Finke reported that the City is still awaiting final plat for this project.

ar. 2018-048 Faithbrook Church, Phase 2, Dayton. This is an application for review of an expansion of an existing church located northeast of the intersection of Fernbrook Lane and Elm Creek Road. The Commission approved this project at their November 2018 meeting conditioned upon receipt of a SWPPP meeting NPDES requirements and the City accepting maintenance responsibility or recording a modified O&M plan for the stormwater features on the site in a form acceptable to the Commission. On February 7, 2019, Jason Quisberg reported that this project has gone idle; it is believed to be due to funding needs of the applicant. It was expected activity would resume in Spring 2019.

as. 2019-001 Fernbrook View Apartments, Maple Grove. This is a 4.85-acre rural residential lot located at the northeast intersection of CSAH 81 and Fernbrook Lane. The applicant proposes to construct a 2-story, 42-unit apartment building. This project was approved at the February 2019 Commission meeting with the following conditions: (1) the applicant pursue utilizing water from the NURP pond for irrigation needs for this property; (2) long term operation and maintenance on the stormwater basin must be addressed; (3) mean average pond depth must meet the Commission standard; (4) pond filter bench details must be provided. With the exception of the O&M plans, these conditions have been met by the applicant. This project was approved by the Commission's technical advisor per the updated project review dated February 5, 2020.

at. 2019-002 Parkside Villas, Champlin. This is two adjacent rural parcels totaling 13.9 acres that are proposed to be split into 56 single-family residential lots. It is located on the east side of Goose Lake Road just south of its intersection with Elm Road (CR 202). The review is for compliance with Commission Rules D and E. At their February 2019 meeting the Commissioners approved Staff's findings dated January 29, 2019, contingent on (1) a long term O&M agreement on the stormwater basin and irrigation system being provided and recorded on the property title and (2) the applicant working with the City and Three Rivers Park District to safely outlet the pond water below the trail system adjacent to the property line.

au. 2019-021 Brenly Meadows, Rogers. This is a 38-unit townhome project proposed on 6.9 acres north of 129th Avenue about one-third mile west of Main Street. It triggered the Commission's review for Rules D, and E. This item was approved by the Commission at their August 2019 meeting, contingent upon O & M plan requirements for the stormwater pond and irrigation system.

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Staff Report
 April 1, 2020
 Page 7

av. 2019-027 Havenwood at Maple Grove. This is a 5.6-acre site located at the northwest intersection of Bass Lake Road (CR10) and Troy Lane (CR101). The site is proposed to be subdivided into two lots. The southerly lot will be 4.5-acres with a 150-unit senior living facility. The remaining outlot (~1.3 acres) is anticipated to be a daycare facility. In their findings dated October 17, 2019, Staff recommended approval contingent upon the irrigation pond and system having an operation and maintenance plan approved by the City and Commission and recorded on the title for this property. A copy of the recorded document must be provided to the Commission.

aw. 2019-032 OSI Expansion, Medina. This an existing business located in the northwest corner of Highway 55 and Arrowhead Drive. The applicant is proposing to build an addition on the south side of the building and add parking to the north side of the site, creating an additional 3.6 acres of new impervious area. In their findings dated February 4, 2020, Staff recommended approval contingent upon receipt of O& M plans on the stormwater facilities that meet the Commission's requirements. *Derek Asche reported on March 4, 2020, that recordation of the O&M plans is still pending.*

BUFFER REVIEW

In 2020, another one-third of the County will be reviewed for buffer violations. This will include Dayton, Plymouth, Maple Grove, and Champlin. Owners of parcels found to be newly out of compliance will be notified and given a chance to take corrective action before being referred to BWSR for enforcement.

ELM CREEK FLOODPLAIN MAPPING PROJECT

Heather Hlavaty at Barr Engineering provided the following update for April

Work conducted over the last month:

1. Delineation of stream centerlines for major tributaries in the watershed
2. Identification of survey needs and cross-section locations
3. Addressed DNR's preliminary hydrology submittal comments
4. Requested effective HEC-2 models from the DNR

Work that is anticipated to occur over the month:

1. Receive effective HEC-2 hydraulic models from the DNR
2. Review effective HEC-2 models
3. Begin to update/re-develop HEC-RAS hydraulics model
4. Identify additional survey needs

Data/input we are waiting on from others

1. Existing hydraulic models for Elm Creek and tributary creeks from the DNR (likely will receive today)

Budget spent through 4/1/2020: \$ 35,965 (60% remaining)

RULE D - STORMWATER MANAGEMENT
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Amendment #1 for General Grant Contract #141447/3000131351 Between the State of Minnesota and the Elm Creek Management Commission for Improved Floodplain Modeling and Mapping

Contract Start Date:	<u>May 22, 2018</u>	Total Contract Amount:	<u>\$ 92,773.00</u>
Original Contract Expiration Date:	<u>April 30, 2020</u>	Original Contract:	<u>\$ 92,773.00</u>
Current Contract Expiration Date:	<u>April 30, 2020</u>	Previous Amendment(s) Total:	<u>\$ 00.00</u>
Amended Contract Expiration Date:	<u>March 31, 2021</u>	This Amendment:	<u>\$ 00.00</u>

This amendment is by and between the State of Minnesota, through its Commissioner of Natural Resources (“State”) and Elm Creek Watershed Management Commission, 3235 Fernbrook Lane North, Plymouth Minnesota 55447 (“Grantee”).

Recitals

1. The State received a federal award for pass through grants to local units of government to improve floodplain mapping. Funds awarded under this agreement were provided by the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) Program, CFDA 97.045, under 2 CFR 200.
2. The State has a grant contract with the Grantee identified as #141447/3000131351, dated May 22 2018 (“Original Grant Contract”) to provide funding for improved floodplain modeling and mapping.
3. The State and grantee agree that additional time is necessary to complete the work for which funding was awarded.
4. The State and the Grantee are willing to amend the Original Grant Contract as stated below.

Grant Contract Amendment

REVISION 1. Clause 1. “**Term of Grant Contract**” is amended as follows:

- 1.1 Effective date:** May 15, 2018, or the date the State obtains all required signatures under Minnesota Statutes §16C.05, subdivision 2, whichever is later. Per [Minn.Stat. §16B.98](#) Subd. 7, no payments will be made to the Grantee until this grant contract is fully executed. **The Grantee must not begin work under this grant contract until this contract is fully executed and the Grantee has been notified by the State’s Authorized Representative to begin the work.**
- 1.2 Expiration date:** ~~April 30, 2020~~ March 31, 2021, or until all obligations have been satisfactorily fulfilled, whichever occurs first.
- 1.3 Survival of Terms.** The following clauses survive the expiration or cancellation of this grant contract: 8. Liability; 9. State Audits; 10. Government Data Practices and Intellectual Property; 13. Publicity and Endorsement; 14. Governing Law, Jurisdiction, and Venue; and 16. Data Disclosure.

REVISION 2. Clause 2. “**Grantee’s Duties**” is amended as follows:

The Grantee, who is not a state employee, will be responsible for tasks generalized below, consistent with the details included in Revised Attachment A.1 – Hennepin County Elm Creek Watershed Management Commission Proposal to Provide FEMA Floodplain Modeling and Mapping, dated ~~March 7, 2018~~ March 24, 2020, attached and incorporated hereto:

- Submit updated hydrology modeling for the watershed using either HEC-HMS or SWMM
- Submit updated stream hydraulics using HEC-RAS
- Create and submit floodway and floodplain shapefiles using HEC-RAS mapper
- Create and submit depth grids using the RAS Mapper built in to HEC-RAS
- Create and submit new work maps illustrating new SFHA and other information required by the State

- Attend kickoff, data review, and 90% progress meetings
- Prepare and submit reports documenting hydrology, hydraulics, and mapping methods and results

All work shall comply with required grants management policies and procedures set forth in [Minn.Stat. §16B.97](#), Subd. 4 (a)(1).

REVISION 3. Clause 4.2. (a) **“Invoices/Deliverables”** is amended as follows:

(a) *Invoices/Deliverables*

The State will pay the Grantee after the Grantee submits itemized invoices for deliverables produced or the services actually performed and the State's Authorized Representative accepts the invoices. Invoices must include the billing period of work performed and be submitted timely and with project deliverables. Reimbursement will be made in accordance with the following schedule:

- upon receipt and acceptance of Grantee's updated/new hydrologic model and technical memorandum describing assumptions and methods used.
- upon receipt and acceptance of Grantee's HEC-RAS models and documentation for detailed and non-detailed areas.
- upon receipt and acceptance of Grantee's GIS work and mapping, including depth grids, shapefiles for flood inundation areas, cross-sections, and stream centerlines.
- upon receipt and acceptance of invoice for data organization and survey location review.
- upon receipt and acceptance of completed project reporting.
- upon documentation of meeting participation and invoice for time.
- final financial reconciliation for any outstanding eligible project reimburseables.

Requested reimbursement amounts for each work task shall not exceed 120% of the amount identified for each work task in the estimated budget contained in Attachment A of this agreement. Upon project completion, financial reconciliation will be done to ensure Grantee is reimbursed for all actual costs of services and deliverables, not to exceed \$92,773.00.

It is required that invoices be submitted, at a minimum, by August 31 of each year for eligible expenses incurred in the **previous** fiscal year which is July 1 – June 30. If expenses are extensive, reimbursement requests may be submitted monthly or quarterly. Itemize the eligible expenses by the month of occurrence, not liquidation. If invoices are not received in this format, it could delay receipt of payment.

Except as amended herein, the terms and conditions of the Original Grant remain in full force and effect.

Signature page follows

1. STATE ENCUMBRANCE VERIFICATION

Individual certifies that funds have been encumbered as required by Minn. Stat. §§16A.15 and 16C.05.

Signed: FB

Date: 3/25/2020

Contract Number: 141447/3000131351

3. STATE AGENCY

Individual certifies the applicable provisions of Minn. Stat. §16C.08, subdivisions 2 and 3 are reaffirmed.

By: _____
(with delegated authority)

Title: Director, Ecological & Water Resources

Date: _____

2. GRANTEE

The Grantee certifies that the appropriate person(s) have executed the grant contract on behalf of the Grantee as required by applicable articles, bylaws, resolutions, or ordinances.

By: _____

Title: _____

Date: _____

By: _____

Title: _____

Date: _____

Distribution:

Agency

Contractor

State's Authorized Representative - Photo Copy

REVISED ATTACHMENT A.1
ELM CREEK WATERSHED MANAGEMENT COMMISSION

Hennepin County Elm Creek Watershed Management Commission Proposal to Provide FEMA
Floodplain Modeling and Mapping
March 7, 2018 March 24, 2020

Project Understanding and Approach

The purpose of this project is to update the Special Flood Hazard Areas shown on the FEMA Floodplain Maps that are located within the Elm Creek Watershed. In order to accomplish this, the existing Elm Creek Hydrologic and Hydraulic models will be created/updated in current modeling packages Acceptable to the Minnesota DNR. The areas to be studied are those presented to us by the Minnesota DNR in their figure for the Elm Creek watershed as attached. There are both detailed and non-detailed Areas that require work under this scope to be included in this project.

In general, the scope of this proposal is to:

1. Update the Hydrology modeling for the watershed using either HEC-HMS or SWMM.
2. Update Creek Hydraulics using HEC-RAS
3. Create Floodway and Floodplain shapefiles using HEC-RAS mapper
4. Create Depth Grids using the RAS Mapper built into HEC-RAS
5. Create New Work Maps showing the new SFHA and other information required by the DNR
6. Other reports and documentation of the work

Task 1: Meetings

Several Meetings will be required at various states between project partners. We assume the Minnesota DNR will provide meeting agendas and notes for each of these meetings. We anticipate the following meetings:

1. Kickoff Meeting: An overall meeting to introduce the project. Attendees would include representatives from Elm Creek, Hennepin County, the Minnesota DNR, and a representative of the cities. The purpose of the meeting will be to introduce the overall project tasks and schedule and get all expectations on the table.
2. Meeting with all cities in the watershed: The purpose of this meeting will be to review data needs to complete the studies as required. Specific topics will include availability of data and identification of any specific areas of concern from the cities representatives.
3. 90% Progress Meeting / Flood Risk Review Meeting (FRR): This meeting is to present near final work products, discuss any outstanding issues, and determine the final scheduling.

Task 2: Data Collection and Organization

~~Hennepin County~~ Elm Creek Watershed Management Commission will provide each City a data request for all record plan information required for their particular city in addition to any information the Minnesota DNR may request. ~~Hennepin County~~ Elm Creek Watershed Management Commission proposes to provide this list at the meeting under Task 1 where the project is introduced to the Cities.

Specifically, ~~Hennepin County~~ Elm Creek Watershed Management Commission will request:

- Any drainage system maps showing all stormwater features such as ponds and pipes.
- Land use mapping showing existing and proposed land uses
- Any information including construction plans and as-built plans for any crossing locations of the special flood hazard areas identified on mapping.

In addition, ~~Hennepin County~~ Elm Creek Watershed Management Commission will compile:

- USGS Gauging station data
- LIDAR Data from the MNDNR and prepare for use in modeling
- Previous TR-20 and HEC-2 Modeling for Elm Creek.

~~Hennepin County~~ Elm Creek Watershed Management Commission will review the compiled data and identify areas that require further investigation, whether that is digging deeper to find information or identifying areas where others may need to conduct a survey to obtain the information.

Task 3: Provide Required Survey Locations for others to complete survey

~~Hennepin County~~ Elm Creek Watershed Management Commission will work with the Minnesota DNR to identify all locations where a detailed site survey is required to comply with the Minnesota DNR's required scope of work for crossings. The information will be provided to the Minnesota DNR or a contractor of the DNR's choosing to collect the survey data. ~~Hennepin County~~ Elm Creek Watershed Management Commission will review all supplied survey data for errors and provide direction for additional survey as needed as a result of errors and or omissions.

Deliverables:

- Survey location figures

Task 4: Hydrology Update

This task will result in an updated model of the Elm Creek Watershed, better reflecting current conditions as opposed to the present modeling dating back to the 1970's. This effort will build upon the existing modeling that currently exists for the watershed which includes the original TR-20 modeling from the 1970's and the HydroCAD model created from the TR-20 model as part of the Elm Creek Channel study conducted in the mid 2000's.

A new model, using either HEC-HMS or SWMM will be created. The previous watershed boundaries will be reviewed for consistency with the 2011 LIDAR data collected by the DNR, as well as information on storm drainage systems provided by each of the cities. Non-detailed areas will also be analyzed at a level to permit the non-detailed hydraulic analysis to occur.

Runoff will be determined using a method agreeable to the Minnesota DNR. While the current models use a curve number approach, other methods will be discussed and an agreement reached on one to use that meets the needs of this project as well as furthers the potential of future studies. Rainfall distributions will also be reviewed, including for snowmelt to ensure the proper method is selected.

Peak runoff rates for the 10%, 4%, 2%, 1% and 0.2% annual chance flood events will be determined for both detailed and non-detailed study areas. Peak flows will be calibrated with the flow data available from the USGS gauging station located on Elm Creek near Champlin.

Calibration to known flows at the USGS stream ~~gauge~~ gauge on Elm Creek near Champlin will be provided as part of this task.

Internal QA/QC on the hydrology modeling will be done using ~~internal Hennepin County staff~~ Elm Creek Watershed Management Commission to verify input data and output results.

Deliverables:

- An updated/new hydrologic model of the Elm Creek Watershed in HEC-HMS or SWMM
- A technical memorandum describing the assumptions and methods used to create the model and results
- Documentation of the QA/QC analysis from ~~Hennepin County~~ Elm Creek Watershed Management Commission and the DNR.

Task 5: Hydraulics Update (Detailed Study Areas)

This task will create a revised hydraulic model of the Elm Creek Watershed in HEC-RAS. The proposed models will be a completely new model created from scratch instead of trying to replicate the previous HEC-2 models created in the 1970's. This will be done for all detailed areas shown in the DNR figure for the Elm Creek Watershed. The Hydraulic analysis will be done for the 10%, 4%, 2%, 1%, and 0.2% peak flood events. In order to create this model, the following tasks will be performed:

- Cut new cross sections at all old cross section locations (cross section locations already available in GIS) using the DNR's LIDAR data for overbank areas. Inchannel geometry will be created from the DNR requested survey bridge crossings, other channel survey locations, and as-builts. Determine Manning's N values based on current conditions for overbank and channel areas,
- Run the models and review, revise, and troubleshoot.

Floodway analysis would be conducted on all detailed study areas as identified in the figure supplied by the DNR.

Similar to the Hydrology task, the initial QA/QC will be provided by ~~internal Hennepin County staff~~ Elm Creek Watershed Management Commission who will review inputs and model outputs.

Deliverables:

- HEC-RAS models for each stage of the analysis and flood events.
- Documentation of responses to the QA/QC review process.

Task 6: Hydraulic Update (Non Detailed Study Areas)

Non-detailed study areas will be analyzed in a different manner. Areas identified on the figure supplied by the DNR as non-detailed study areas will still be analyzed with HEC-RAS where appropriate, and for all storm events as done in the detailed study areas. However, cross sections will be based solely on cross sections cut using the DNR's LIDAR data. No channel data will be collected or determined for this modeling. In addition, only as-builts or construction plans will be used to determine information for all culverts or bridge crossings.

QA/QC will be provided by the ~~Hennepin County~~ Elm Creek Watershed Management Commission internal staff.

Deliverables:

- HEC-RAS model(s)
- Cross Sections data and locations where not previously identified
- Documentation of QA/QC has been resolved

Task 7 – Mapping Products

For detailed study areas, inundation maps for the 1%, 0.2% and floodway scenarios will be developed and produced using the RAS mapper functions of HEC-RAS and then edited in the Arc-GIS environment. For non-detailed study areas, only the 1% events will be mapped.

The maps produced by the RAS mapper package and then edited in Arc-GIS will be QA/QC'd for conformance with the model results. This step can be done ~~internally by Hennepin County~~ Elm Creek Watershed Management Commission internal staff and documentation of all QA/QC processes and steps will be provided.

The information from these steps will then be imported into the required shapefile format provided by the DNR.

Depth Grids will also be generated in the same fashion and events as documented above. QA/QC and documentation will also be provided.

Deliverables:

- Final Depth Grids for all return intervals as documented above.
- Final shapefiles for flood inundation areas, cross sections, and stream centerlines.
- Documentation of the QA/QC process

Task 8 – Narrative Products

~~Elm Creek/Hennepin County~~ will provide written narrative documentation at the 60, 90 and 100% levels. All steps will be distributed to the DNR and all cities in the watershed for comment and review. The 90% document will reflect the comments and changes from the 60% review, and the final document will address and additional comments from the 90% stage.

The summary report will document the process of creating the hydrology, hydraulics, and mapping products.

Budget:

The total budget proposed for this task is \$92,772.45. ~~This is based on a rate of \$71.09 per hour from Hennepin County.~~

Task	Task Description	Hours	Cost
1	Meetings	35	\$2,488.15
2	Data Collection and Organization	40	\$2,843.60
3	Survey Location Identification	30	\$2,132.70
4	Hydrologic Analysis	275	\$19,549.75
5	Hydraulic Analysis – Detailed	425	\$30,213.25
6	Hydraulic Analysis – Non-Detailed	175	\$12,440.75
7	Mapping Products	225	\$15,995.25
8	Narrative	100	\$7,109.00
	Grand Total:	1305	\$92, 772.45

Schedule:

Kickoff Meeting: March 2018

Hydrology to IAHC: ~~June 2018~~ May 2020

Hydraulic Model Submittal to DNR for Review: ~~December 2018~~ October 2020

Revised Model Submittal to DNR: ~~May 2019~~ November 2020

Draft Floodplain Shapefiles and Depth Grids to DNR: ~~September 2019~~ November 2020

60% Narrative to DNR for Review and Comment: ~~October 2019~~ November 2020

All Final Files to DNR: ~~February 2020~~ December 2020

Note that this schedule is shifted later than the suggested DNR schedule due to staffing constraints and timing of starting the project.



Memorandum

To: BCWMC & ECWMC
From: Barr Engineering Co.
Subject: Manufactured Treatment Devices (MTD's)
Date: April 1, 2020
Project: MTD Work Group Update

Following is a summary of the status of the MTD work group. Barr staff (Jim Herbert and/or Josh Phillips) are attending MPCA work group meetings on behalf of BCWMC and ECWMC and sharing costs between the organizations.

Background

Manufactured Treatment Devices (MTDs) are underground proprietary stormwater devices that typically include a filter system to enhance removal of trash, floatables, total suspended solids, phosphorus, and other contaminants. MTDs have been reviewed by WMOs and municipalities as alternatives to other practices due to space limitations or where stormwater ponds or infiltration and biofiltration systems may not be practical.

The Bassett Creek Watershed Management Commission (with support from Nine Mile Creek WD, Ramsey Washington Metro WD, Riley Purgatory Bluff Creek WD, Shingle Creek WMO, West Mississippi River WMO) sent a letter dated July 26, 2019 formally requesting the Minnesota Pollution Control Agency (MPCA) evaluate the performance of various stormwater MTDs and include protocols for MTDs in the Minnesota Stormwater Manual. The MPCA was requested to take one of the following actions:

- 1) Cooperate with and support the implementation of the Water Environment Federation's (WEF) Stormwater Testing and Evaluation of Products and Practices (STEPP) verification program, currently under development. We prefer this option because the STEPP verification program is already well along in its development, it will be a nationwide program, and we understand that MPCA staff are already engaged in the program. Once implemented, the STEPP verification program would validate MTD performance; it would be up to the states (e.g., the MPCA) to certify the MTDs.
- 2) Develop its own statewide program for evaluating and certifying stormwater MTDs.

In response to the letter, the MPCA scheduled a meeting on January 29, 2020 with several watershed management organization representatives to review the letter and discuss how MTDs are used and to establish a path forward. An outcome of the meeting was to form the MTD Work Group and meet with Seth Brown who is involved with STEPP.

MTD Work Group

The work group was formed and includes representatives from WMOs/WDs, Saint Anthony Falls Laboratory (SAFL), industry (MTD manufactures), and the MPCA. Following is a summary of MTD work group meetings:

Meeting No. 1: March 2, 2020:

A group of about a dozen folks met to discuss the upcoming March 12, 2020 meeting with Seth Brown and discuss issues for moving forward on addressing manufactured treatment devices. Mr. Brown is actively working with others on the STEPP effort. An agenda and questions to ask Mr. Brown was prepared. Key discussion points included:

- The preference for field-tested devices in Minnesota.
- Testing protocols/standards, particularly for phosphorus and with dissolved phosphorus.
- Maintenance is critical for performance of BMPS and must be considered in MTD evaluation.

Meeting No. 2: March 12, 2020:

The work group met with Seth Brown (STEPP) who gave the presentation *Overview of Stormwater Testing and Evaluation for Products and Practices* (STEPP). The goal of STEPP is to develop a national testing/evaluation and verification program for products and practices and to increase performance of BMPs. The focus of STEPP is on verification. Other entities, such as the MPCA, municipalities, WMOs or other agency, would be tasked with certification. Key discussion points included:

- Stormwater BMP testing and certification is costly and time intensive. Cost savings can be made through less sampling and/or lab sampling only (i.e. no field sampling).
- Work group is leery of lab-tested approval – need field verification. There was some discussion of approved testing sites. For example, the University of New Hampshire is approved as a testing site. Is this something we might want to pursue in Minnesota?
- Work group focus is on phosphorus removal. There was discussion of dissolved phosphorus, which is currently not required for Washington's TAPE and New Jersey's NJCAT programs.
- Operation and maintenance is critical in the evaluation of MTDs.
- Ideally, regional testing would be performed; can national testing be better used regionally?
- MTD verification testing can take several years.
- STEPP is not currently funded to take on regional verification of MTDs.

Next Steps

The MPCA and work group are compiling a list of items or issues we would like addressed regarding MTDs. Seth Brown (STEPP) will develop a pilot project for Minnesota in the context of STEPP. Ultimately, the MPCA will submit a letter of support and a list of items and a letter of support to Seth Brown.

elm creek

Watershed Management Commission

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E-mail: surfacewatersolutions@outlook.com

Elm Road Area Project (March 26, 2020 submittal) **Maple Grove, Project #2020-004**

Project Overview: This project is 9 rural residential parcels totaling approximately 60 acres. The proposed development would create 106 single family residential lots in two phases. Phase 1 is 75 lots with an amenity/pool lot. Phase 2 will be 31 additional lots to the west of Phase I. The project is located along Elm Road just west of the Vicksburg Lane/CR 47 intersection near the border of Plymouth. The Commission standards require review for Stormwater Management (Rule D), Erosion and Sediment Control (Rule E) and Wetland Alteration and Buffer Strips (Rules G & I), Floodplain (Rule F) and Stream Crossings (Rule H).

Applicant: Elm Road South Inc., Attention Jake Walesch, 10850 Old County Road, Suite 200, Plymouth, MN 55441. Phone: 763-360-1307. Email: nate@gonyeacompany.com.

Agent: Sathre-Bergquist Inc., Attention Eric Johnson, 150 Broadway Ave. S, Wayzata, MN 55391. Phone: 952-476-6000. Email: ejohnson@sathre.com.

Exhibits:

- 1) A complete ECWMC application received February 3, 2020.
 - a. ECWMC Request for Review and Approval dated December 5, 2019.
 - b. City of Maple Grove authorization for review, dated January 27, 2020
 - c. Project review fee, \$5,125.00 for 60.48 acres, residential site development project received February 3, 2020
 - d. Site plan design submittal via email link on January 29, 2020, February 18, 2020, March 23, 2020 and March 26, 2020.
- 2) Elm Road Area Project, Preliminary Site Plans by Sathre-Bergquist, Inc. dated December 4, 2019 with last revision update of March 26, 2020 unless otherwise noted.
 - a. Sheet SP, Preliminary Site Plan
 - b. Sheet PH, Phasing Plan
 - c. 3 of 3 Sheets, Alta/MSPS Land Title Survey (dated September 10, 2019)
 - d. 2 of 2 Sheets, Preliminary Plat dated November 27, 2019 with latest revision date February 4, 2020.
 - e. Sheets ST1 to ST5, Preliminary Street Plan, Elm Road.
 - f. Sheets SW1 to SW4, Preliminary Sanitary Sewer & Watermain Plan
 - g. Sheets SS1 to SS4, Preliminary Storm Sewer Plan.
 - h. Sheets GP1 to GP8, Preliminary Grading Plan.
 - i. Sheets ER1 to ER6, Preliminary Erosion Control Plan
 - j. Sheet W1, Wetland Impact Plan with latest revision date of January 17, 2020.
 - k. Sheets TP1 to TP3, Tree Preservation Plan.
 - l. SWPPP Plans. 3 of 3 sheets.

- 3) Elm Road Development Stormwater Management Plan by Advanced Engineering and Environmental Services, Inc, dated March 25, 2020.
 - a. Elm Road P8 model information.
- 4) Copy of memo from Sathre-Bergquist dated February 17, 2020 responding to water resource review comments from the City of Maple Grove, dated December 17, 2019.
- 5) Correspondence from Sathre-Bergquist dated March 18, 2020 – response to ECW 2/19/20 comments.
- 6) Elm Road Area Lot Tabulation Information from Sathre-Bergquist dated December 4, 2019.
- 7) Elm Road Draft Test Pit Logs by Haugo GTS dated January 24, 2020.
- 8) MN WCA Notice of Application from LGU for wetland boundary/Type for the Elm Road corridor dated March 4, 2020.

Findings:

- 1) A complete application was received February 3, 2020. The initial decision period deadline per MN Statute 15.99 is April 3, 2020. Staff administratively extended the deadline an additional 60-days to June 3, 2020 to provide time for review and Commission actions for the plan revisions received March 23, 2020.
- 2) The complete site consists of 9 parcels totaling 59.1 acres proposed to be developed in two phases into 107 single family residential lots with one amenity/pool lot. It will create 18.45 acres of new impervious areas.
- 3) There are five wetlands delineated on these nine parcels. Four impacts that total 18,727 sq. ft. are proposed. Maple Grove is the Local Government Unit in charge of administering the MN WCA in their jurisdiction. No wetland replacement plan has been received to date. This review will evaluate the current wetland buffer plan based on the assumption WCA noticing and decision from the LGU will occur prior to grading and no changes will occur to the current wetland grading plans.
- 4) Plans submitted provide for grading and some realignment of Elm Road between Vicksburg Lane and Lawndale Lane (5,900 feet). Along the Elm Road plan proposal, there will be wetland, floodway, and floodplain impacts. These impacts need to be addressed to conform to the Commission's standards for Rules E, F, G and H. An accounting of the new impervious areas must also be assessed for potential stormwater management requirements. In discussions with the applicant and City it was determined that the Elm Road grading and erosion controls west of station 30+00 are not part of this review and will occur under a separate project submittal.
- 5) The stormwater and grading review assume Phases 1 and 2 will be mass graded within one year of the ECWMC approval. A written request and approval from the ECWMC for an extension must be received from the applicant prior to the one-year anniversary of the Commission's decision. If this does not occur, a new application process will be required.

Stormwater Management (Rule D)

- 6) There are three wet-detention ponds and three filtration basins proposed for stormwater management on this site to comply with the Commission's stormwater requirements.
- 7) The City of Maple Grove has agreed to the long-term operation and maintenance of the stormwater facilities on this site.
- 8) The existing and proposed drainage patterns will remain similar. Approximately 2/3 of the site drain toward Vicksburg Lane. That water enters a large wetland floodplain

complex that runs northwest and connects into Elm Creek ½ mile west of Vicksburg Lane. The other 1/3 of the area drains westerly before entering Elm Creek about 1200 feet west of Comstock Lane.

Abstraction controls

- 9) There will be 18.45 acres of new impervious areas from this project. Abstraction volumes must be 74,909 cubic feet or greater to meet the Commission requirements.
- 10) Draft soil borings on site in the vicinity and elevations of the filter and pond basins show the primary classification symbol as CL. CL soils are high in clay content and considered poor for infiltration. Based on these soils, filtration and biofiltration are acceptable options for abstraction on this development.
- 11) Filtration volumes proposed in the three filter basins total 84,424 cubic feet. This will meet the Commission's abstraction requirements if skimmer structures are provided on FES C4 (pond 1E) and FES J5 (pond 1W)

Water Quality Controls.

- 12) Water quality controls will occur using the following permanent stormwater measures.
 - a. Wet Ponds 1E, 1W, and 2
 - b. Filter Basin 1 (receives water from Ponds 2 and 1E), Filter basin 1E (receives water from pond 1E) and Filter basin 1W (receives water from pond 1W).
 - i. Iron enhances (5% by weight) sand filter trenches will be utilize over the drain tile to enhance dissolved phosphorus treatment.
 - c. TP pre-development= 13.9 lbs./year. Post Development = 10.1 lbs./year
 - d. TSS pre-development = 4,388 lbs./year. Post-development = 1,581 lbs./year.
- 13) Water quality (TP and TSS) will meet the Commission requirements.
 - a. It is recommended the filter bench drain tile meet the following details.
 - i. Underdrains constructed with Schedule 40 or SDR smooth wall PVC pipe (or a similar pipe and corresponding 'n' value)
 - ii. Use solid sections of non-perforated PVC piping and watertight joints where the underdrain system passes below berms and outside of the basin.

Water Quality Summary Table 1

CONDITION (59.1 AC.)	TP LOAD (LBS/YR)	TSS LOAD (LBS/YR)	FILTRATION (CU. FT.) (18.45 AC. IMPERVIOUS)	ANNUAL VOLUME (AC. FT.)
Pre-development (baseline)	13.9	4,388	N/A	13.95
Post-development without BMPs	43.8	13,635	74,909	45.62
Post-development with BMPs	10.1	1,551	84,424	45.62
Net Change	-3.8	-2,837	-9,515	+31.67

Rate Controls

- 14) There are four main discharge points that were used to compare pre- and post-development discharge rates from this site. These are to the east under Vicksburg Lane, to the southwest, under 63rd Ave., to the northwest into an existing wet/low area off site and to the north.

- 15) For each discharge point from this site, post-development runoff rates for the 2-, 10- and 100-year events are less than pre-development rates. They are as follows.

	2-Year (2.87") Runoff Rate (cfs)		10-Year (4.28") Runoff Rate (cfs)		100-year (7.29") Runoff Rate (cfs)	
	Pre-Dev	Post-	Pre-Dev	Post-	Pre-Dev	Post-
East Watershed	28.2	21.4	69.4	66.2	161.7	152.7
Southwest Watershed	26.7	25.9	44.1	44.0	72.8	68.2
Northwest Watershed	8.3	8.2	20.5	20.1	51.4	50.2
North Watershed	12.9	12.2	32.7	28.0	84.2	67.6

- 16) Rate controls meet the Commission's requirements.

Wetlands and Wetland Buffers (Rules G & I)

- 17) The City of Maple Grove is the LGU in charge of administering the Wetland Conservation Act on this site. The wetland delineation for this site was approved in November of 2019. A replacement plan has not been received as of this review.
- 18) The Commission requires wetland buffers widths that are 10' minimum and 25' average. This requirement is met.
- 19) Monumentation plans meet the Commission's requirements.

Erosion and sediment control plans (Rule E)

- 20) Erosion control plans meet the Commission's requirements.
- 21) The following are recommended to the City for their consideration for this project.
- The City might want to consider permanent ditch checks (rock check dams) at the limits of grading in the existing gullies on lots 77 and 79.
 - An analysis of the existing ditch/gully velocities was done by the applicant at Everest Lane. Current and proposed velocities are 3.7 and 4.3 feet per second for the 10-year storm event. Generally, well established grass vegetated channels can withstand 4.5 feet per second without scouring. Unvegetated channels can withstand 2.0 feet per second without scouring. Assuming this channel is unvegetated, we would recommend armoring this channel section with rock riprap.

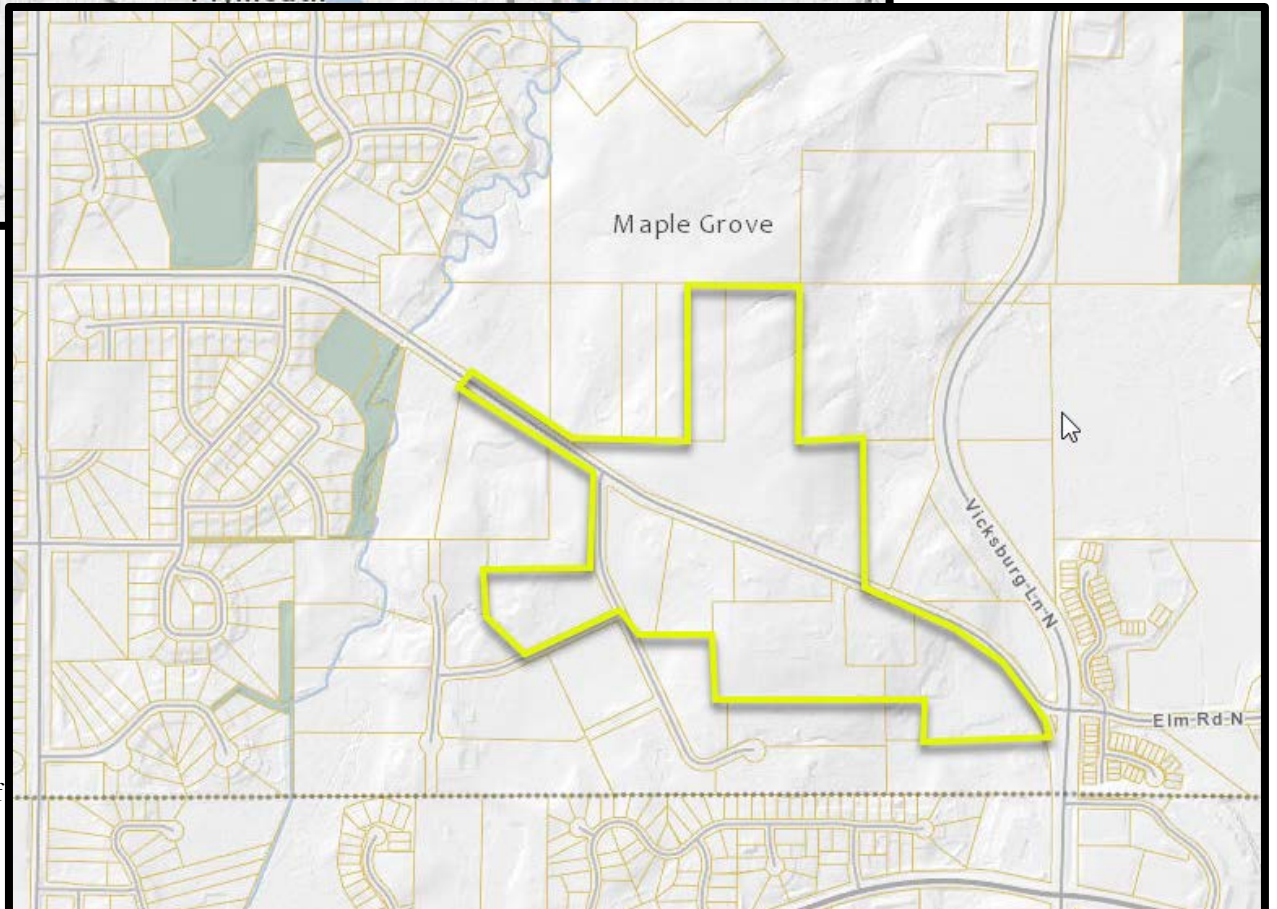
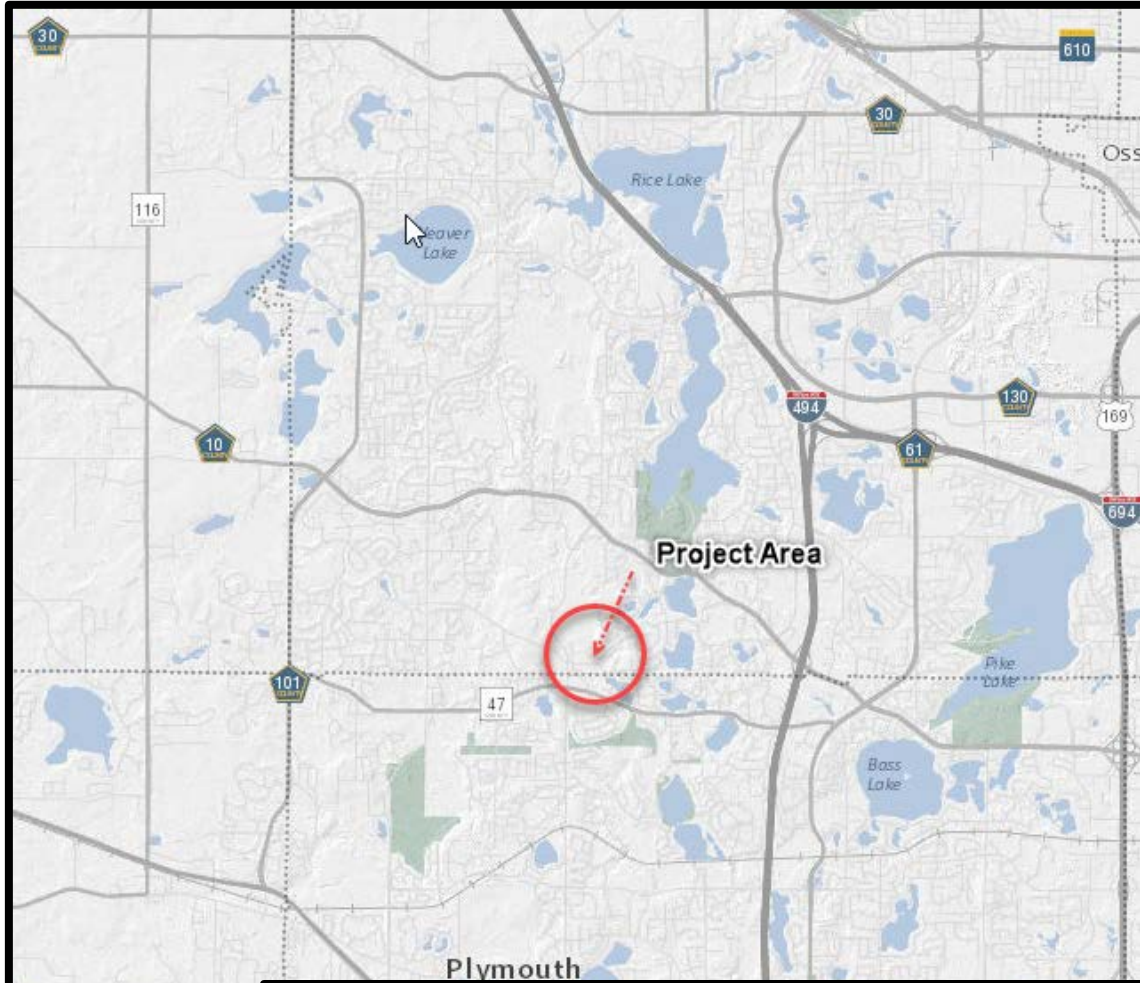
Recommendations: Approval contingent upon appropriate skimming of floatables for the low-flow pipe running into filter basins 1 and 1W.

Barr Engineering
Advisor to the Commission

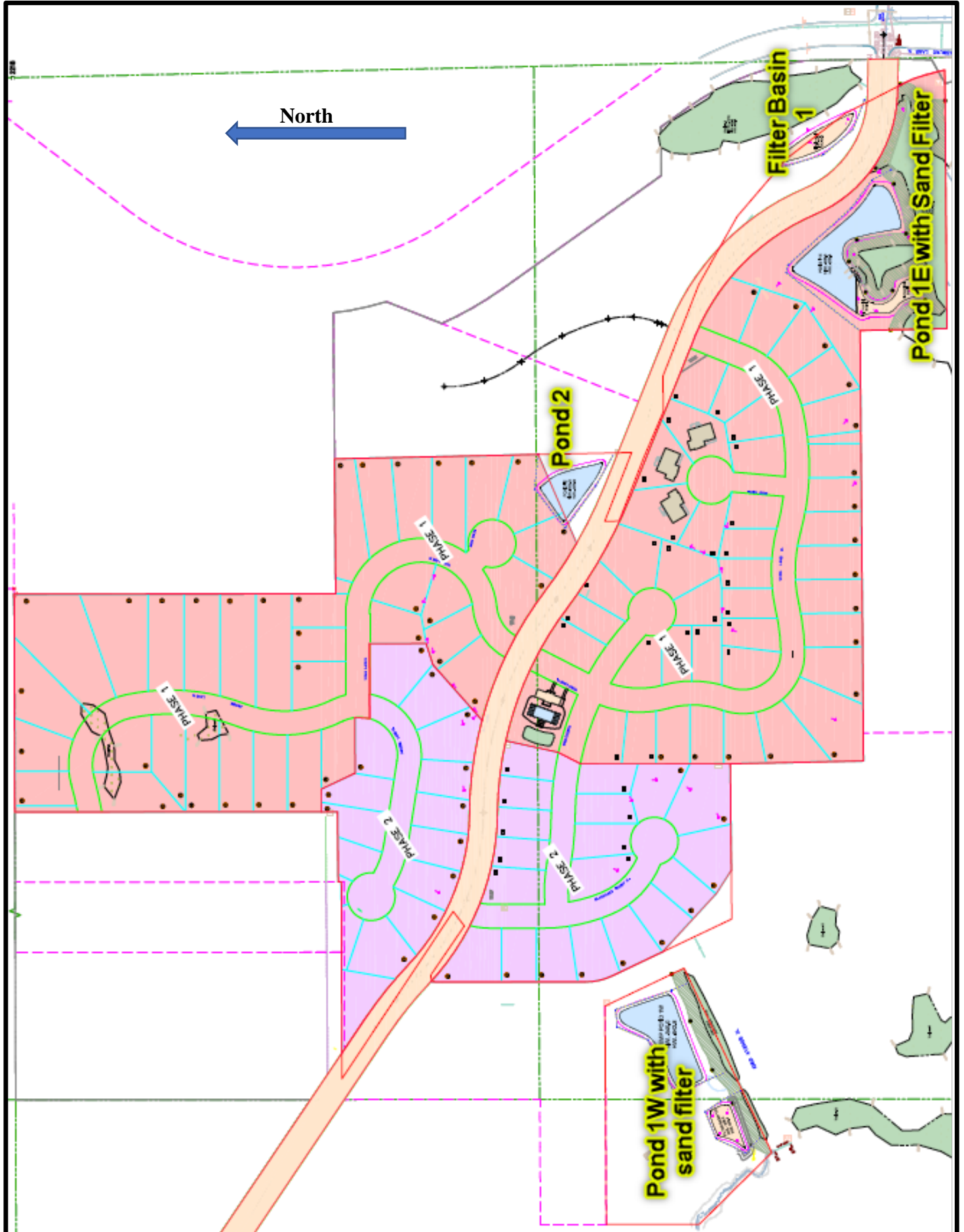


Surface Water Solutions LLC

April 2, 2020
Date







elm creek

Watershed Management Commission

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email: surfacewatersolutions@outlook.com

Elm Creek Watershed Management Commission Review and Comments For Territorial Development Project EAW City of Rogers, EC Project #2020-005

Project Overview:

Lennar Corporation is proposing to construct a residential development on 148.5 acres in Rogers in 6 to 8 phases over 6-8 years. Approximately 40 acres is located NW of the intersection of Tilton Trail and Territorial Road and the remaining 108 acres, SW of the intersection. Most of the area is used for agriculture cropland production. The development will convert this land use into 362 residential units consisting of 190 single family, 48 twin and 124 town homes. The site will create approximately 42.3 acres of new impervious areas. Work will generally start from the north and continue south and west.

Background and Information:

The stormwater management sections of the EAW specifically mentions and addresses the current ECWMC Stormwater Management Plan requirements and standards for volume reduction, water quality, floodplains and erosion controls. The EAW provides preliminary soils information and concludes the soils on-site have the high probability for infiltration.

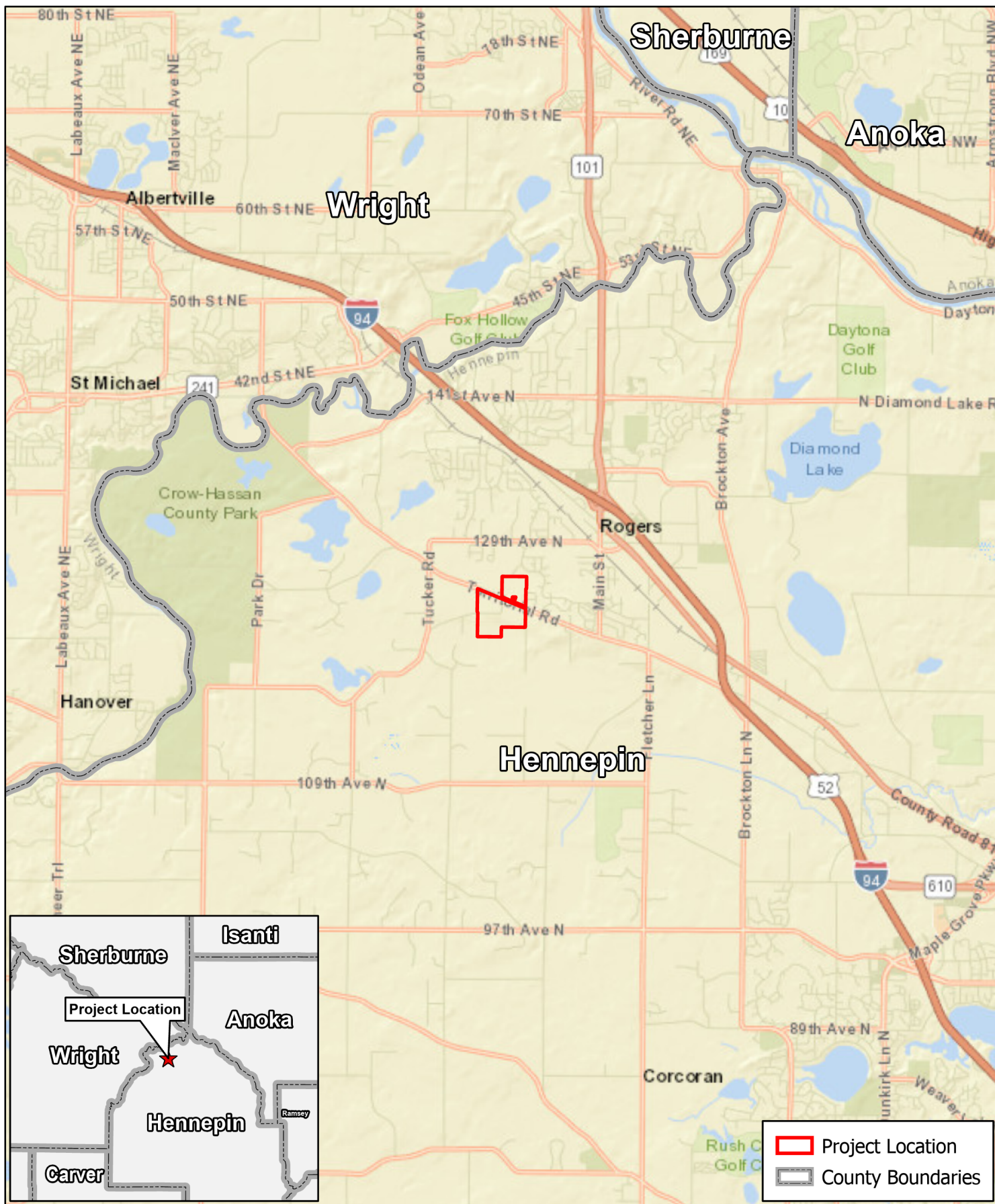
The EAW provides wetland information on this site but does not identify the Commission's rules as they relate to wetlands and wetland buffers.

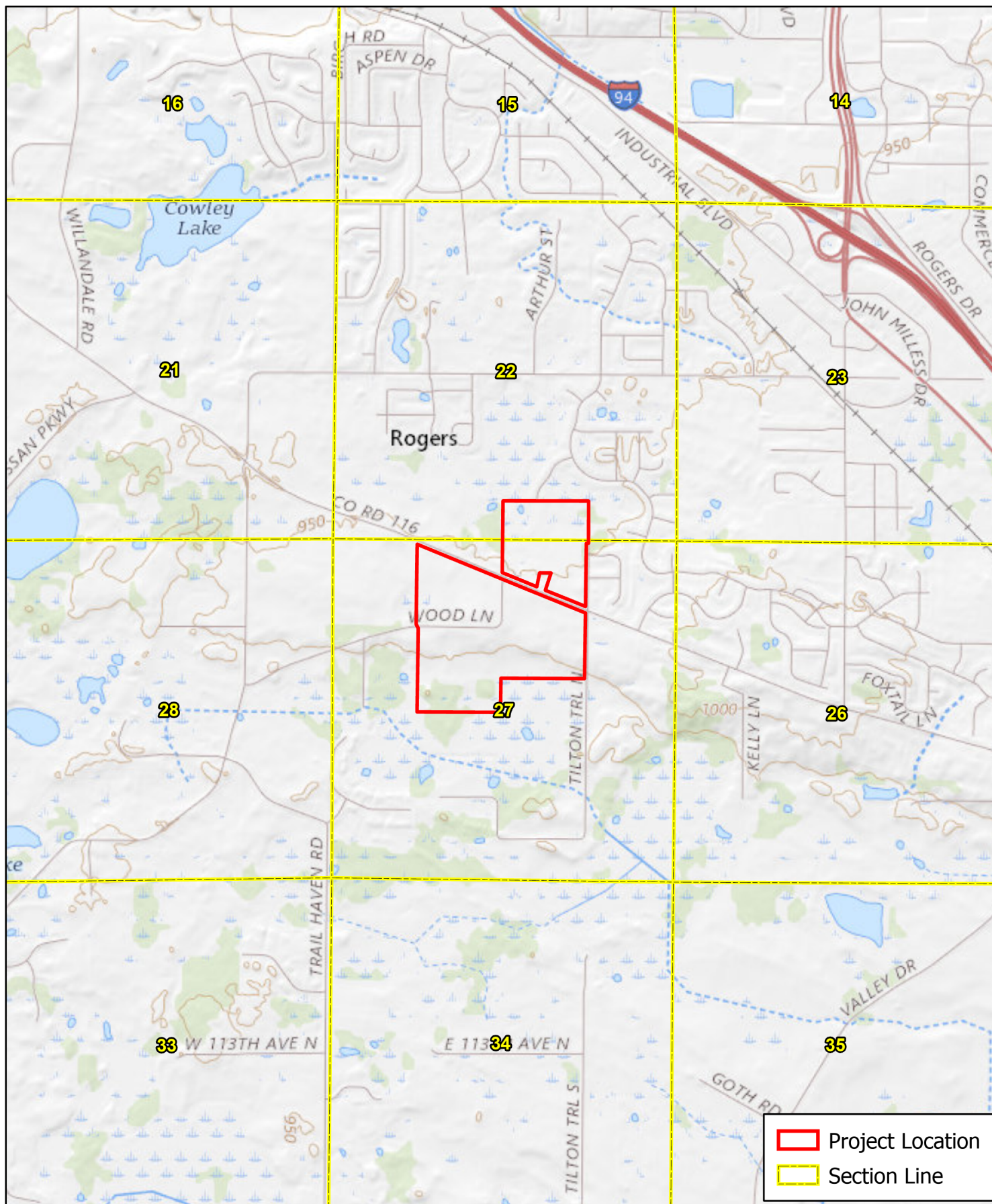
Comments:

- 1) This project and its subsequent phases must be reviewed by the ECWM if it; a) disturbs over 1 acre of land or b) is within the 100-year floodplain or c) is adjacent to a wetland or watercourse or d) is requested by Rogers to be reviewed or e) creates more than one acre of impervious surface on a separate linear project.
- 2) The ECWMC will require on-site infiltration feasibility determinations by a geotechnical/soils engineer per MPCA recommendations. If infiltration is considered viable, infiltration volumes and facility sizes must be calculated based on the measured infiltration rate determined by a double ring infiltrometer test per ASTM Standard D3385 or other ECWMC approved methods.

- 3) The EAW identifies the FEMA flood plan on this site and recognizes the ECWMC rules on floodplains. There is no 100-year flood elevation available for the floodplain shown. FEMA shows the large wetland basin along the south edge of this site as a Zone A floodplain. A Zone A determination means this area is within a 1% annual chance of flooding (100-year flood) but does not have a base flood elevation (BFE) determined for it. The MN-DNR, ECWMC and FEMA are currently modeling the 1% floodplain within the Elm Creek Watershed. If available, the 1% BFE must be used when this area is developed. If an updated model is not available, a BFE must be determined and a FEMA LOMA (letter of map amendment) is recommended.
- 4) Wetland buffers must adhere to the ECWMC requirements. Vegetated buffer strips must average 25 feet, minimum 10' wide adjacent to wetlands and watercourses on this site.

Thank you for the opportunity to review this EAW for compliance to the ECWM 3rd Generation Stormwater Management Plan. Please contact James Kujawa at 952-456-4091 or surfacewatersolutions@outlook.com if you have any questions on this information.







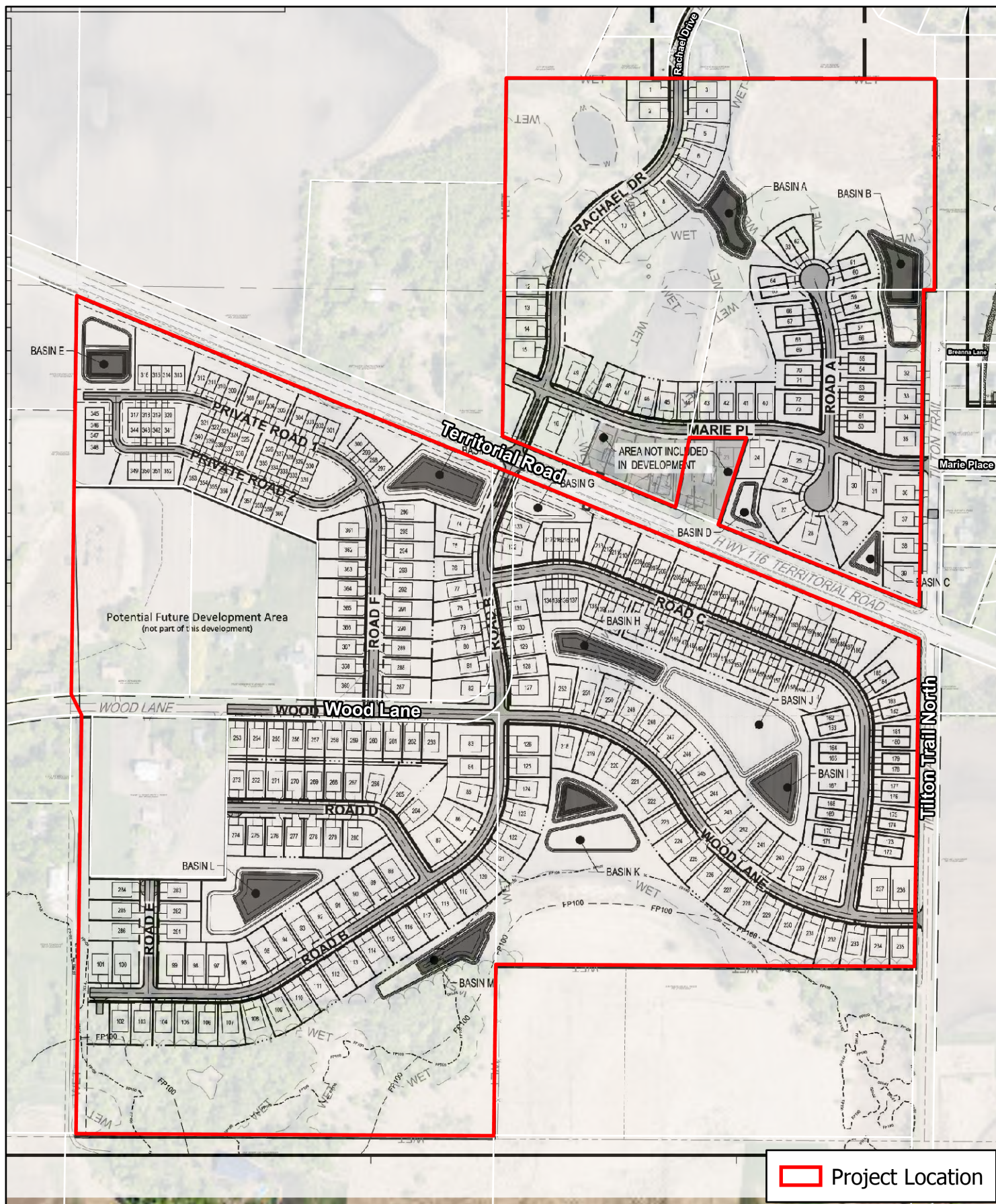


Figure 4: Post-Construction Site Map
Territorial Road Development
City of Rogers, MN

elm creek

Watershed Management Commission

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Zachary Villas of Dayton

(March 5, 2020 revision)

Dayton, Project #2020-006

Project Overview: This is 3 parcels that total 5.74 acres located just south of Diamond Lake Road on the border with Champlin. Fourteen (14) single family residential lots are proposed. This review will be for compliance to the Commissions 3rd Generation Stormwater Management Plan, Appendix C, Rule D (Stormwater Management) and Rule E (Erosion and Sediment Controls)

Applicant: Zachary Villas Homeowners Association, P.O. Box 43008, Brooklyn Park, MN 55443. Phone: 612-867-6533. Email: meadowcreek51@hotmail.com

Agent: Sathre-Bergquist, Inc. 150 Broadway Ave. S., Wayzata, MN 55391. Phone: 952-476-6000. Email: mvangilder@sathre.com

Exhibits:

- 1) A complete ECWMC application received February 27, 2020.
 - a. ECWMC Request for Review and Approval dated February 24, 2020.
 - b. City of Dayton authorization for review, dated February 27, 2020
 - c. Project review fee, \$650.00 for 5.74 acres, residential site development project received February 27, 2020.
 - d. Hard and electronic site plan information submittal received February 27, 2020.
- 2) Zachary Villas of Dayton Site Plans by Sathre-Bergquist, Inc., dated November 22, 2019, with last revision date of March 5, 2020.
 - a. Sheet 1 of 12, Title Sheet
 - b. Sheet 2 of 12, Final Street Plan,
 - c. Sheet 3 of 12, Final Sanitary Sewer & Watermain Plan
 - d. Sheet 4 of 12, Final Storm Sewer Plan
 - e. Sheet 5 of 12, Final Grading Plan
 - f. Sheet 6 of 12, Final Erosion Control Plan
 - g. Sheets 7 to 12 of 12, City Details.
- 3) Juettner Parcels Stormwater Management Plan by Advanced Engineering and Environmental Services dated February 7, 2020.

Findings.

- 1) A complete application was received February 27, 2020. The initial decision period deadline per MN Statute 15.99 is April 27, 2020.
- 2) There are no FEMA or Elm Creek floodplains, streams or wetlands on this site.

Stormwater Management (Rule D)

- 3) Much of this site drains to two existing depressional areas within it. Because of the sandy soil conditions, there is little to no water that flows off it, including the 100-year events
- 4) One large infiltration pond is proposed to recreate the existing runoff conditions.
- 5) The City of Dayton will provide for the long term operation and maintenance of the stormwater facilities on site.

Abstraction and Water Quality Controls

- 6) 1.302 acres of new impervious areas will be created on site.
- 7) Abstraction through infiltration is proposed.
- 8) Required abstraction is 5,200 cubic feet.
- 9) Actual abstraction will be 35,800 cubic feet.
- 10) Per ECWMC Rule D, e) i) Full infiltration of 1.1 inches of runoff from all impervious surfaces will satisfy the ECWMC requirements for no-net increase in TP and TSS.
 - a. Full abstraction will occur on this site.

Rate and High-Water Controls

- 11) A summary of peak flows for the 2, 10 and 100-year storm events is provided below.

Rate Control Summary

	2-yr (cfs)	10-yr (cfs)	100-yr (cfs)
East-Pre-Development (2.78 Acres)	0	0	0
East Post-Development (0 Acres)	0	0	0
West Pre-Development (6.3 Acres)	1.4	2.1	4.2
West Post Development (9.08 Acres)	1.4	2.0	4.0

- 12) Because of the potential for flooding, the existing homes along the west side of this site where analyzed for critical high-water events. The lowest floor on the existing home adjacent to the pond was determined to be at an elevation of 861.1. With the expansion of the storage area in the new pond design, there will be improvements to the freeboard depths on all the critical storm events as summarized in the following table.

Critical Basin Elevations

West Pond	Pond Elevation 100 Year Event	Freeboard to lowest floor	Pond Elevation - 100 year Back to Back Event	Freeboard to lowest floor
Pre-Development	961.3	+0.2'	962.1	+1.0'
Post Development	958.7	-2.4'	860.8	-0.3'

*lowest floor elevation = 861.1

13) Most of the site is considered landlocked. The proposed plan meets the following Commission requirements on landlocked areas

- a. The basin retains a hydrologic regime complying with floodplain alterations.
- b. The basin provides sufficient storage below the outlet run-out elevation to retain back to back 100' year, 24-hour rainfalls and runoff above the highest anticipated groundwater elevation and prevent damage to property adjacent to the basin.
- c. The design does not create adverse downstream flooding or water quality conditions.

14) Appropriate lowest most floor elevations and overflows are provided to the homes on site.

Erosion and sediment control plans (Rule E)

15) Erosion and sediment controls meet the Commission standards.

Recommendations: Approval.

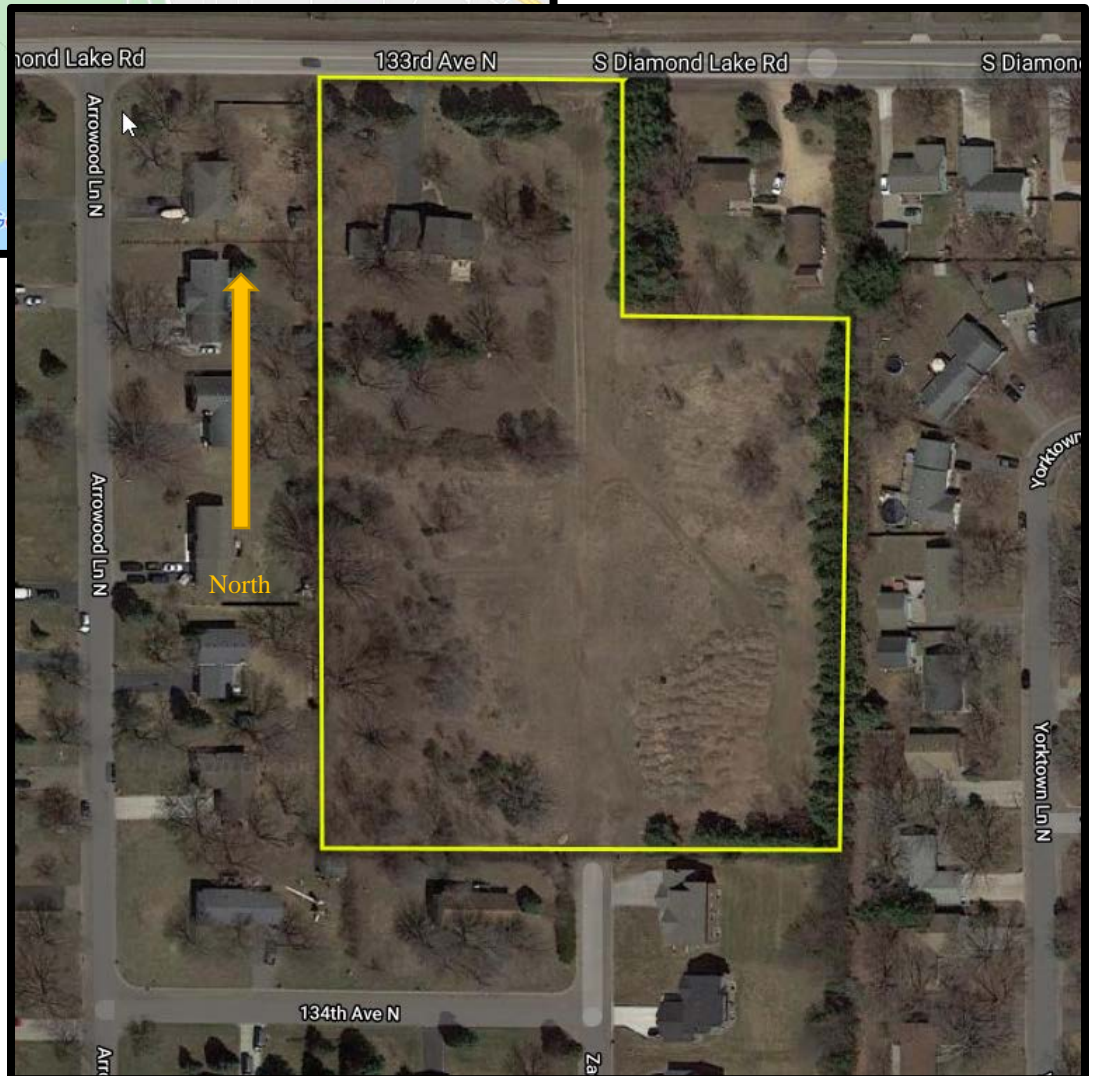
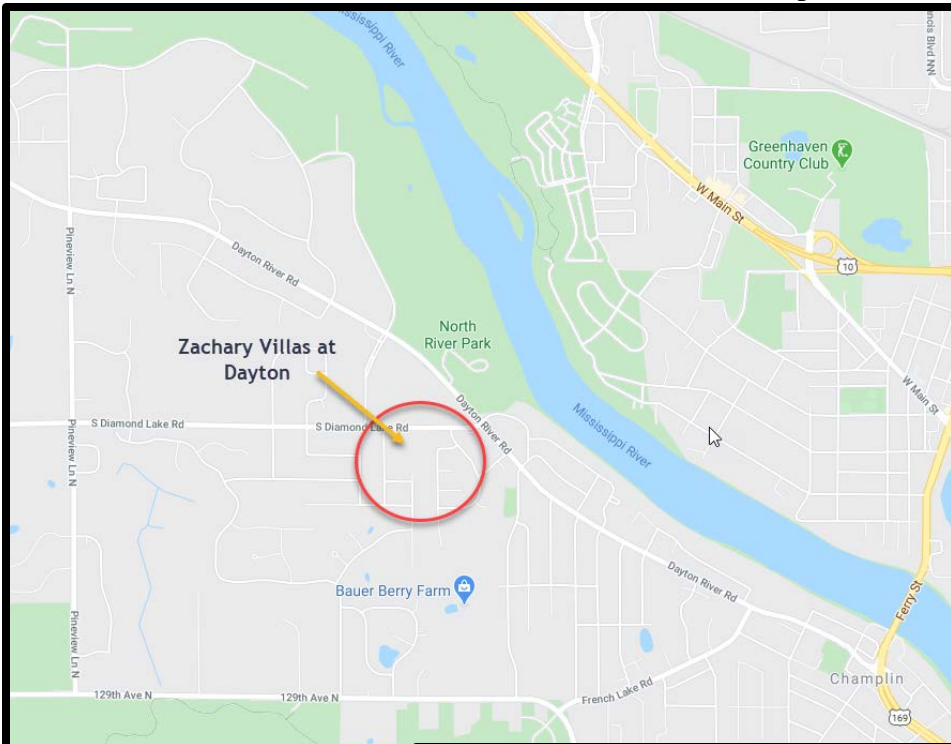
Advisor to the Commission



Surface Water Solutions

March 26, 2020
Date

Location Map



Grading & Drainage Plan

elm creek

Watershed Management Commission

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Pineview and Oakview Lanes N. Improvements

Dayton - Project #2020-007

Project Overview: The City of Dayton proposes to reconstruct and make improvements to Pineview Lane North, Oakview Lane North and part of CSAH 121 due to an increase in traffic volume. Proposed improvements include a roundabout at the intersection of Pineview Lane North and CSAH 121, installation of a multiuse trail along the west side of Pineview Lane North, and general street construction, utility, and drainage improvements on Pineview and Oakview Lanes. The total new impervious areas on this project will be 1.92 acres. The Commission's standards require approval of linear projects that creates one or more acre of new impervious surface. The Commission will review this site for compliance to our floodplain rule (Rule F), stormwater management rule (Rule D), and erosion control rule, (Rule E).

Applicant/Agent: City of Dayton, c/o Wenck Associates, Attention, Daniel Elemes 1800 Pioneer Creek Center, Maple Plain, MN 55359. Phone: 651-395-5225, Email: delemes@wenck.com.

Exhibits:

- 1) Elm Creek Watershed Management Commission Request for Plan Review and Approval received February 26, 2020.
- 2) Project Review Fee \$650.00 received March 2, 2020.
- 3) Memo from Wenck Associates regarding Stormwater Management Plan for SAP 229-114-001 and SAP 229-020-005 dated February 26, 2020, including:
 - a. Existing and Proposed Drainage Maps
 - b. Existing and Proposed HydroCAD Reports
 - c. Existing and Proposed P8 Input and Output Summaries
 - d. Storm Sewer and Inlet Calculations
 - e. Soil Boring Reports
- 4) Pineview Lane N and Oakview Lane N Improvements Plan Set by Wenck Associates, issue date: February 2020. No signature or date.
 - a. Sheet G-101, Title Sheet
 - b. Sheet G-102 Statement of Estimated Quantities and General Notes
 - c. Sheet G-103, General Legend
 - d. Sheets G-104 to G-106, Tabulations
 - e. Sheets G-107 to G-110, Typical Sections
 - f. Sheets C-101 to C-108, Existing Conditions.
 - g. Sheets C-201 to C-208, Removal Plan
 - h. Sheets C-209 to C-214, Erosion Control Plan received March 31, 2020.
 - i. Sheets C-301 to C-310, Site Plan

- j. Sheets C-311 to C-315, Permanent Pavement Markings Plan
 - k. Sheets C-401 to C-402, Utility Plan
 - l. Sheets C-501 to C-504, Storm Sewer Plan and Profile
 - m. Sheets C-601 to C-615, Street Plan and Profile
 - n. Sheets C-701 to C-709, Cross Sections
 - o. Sheets C-801 to C-827, Details
 - p. Sheets C-900 to C-905, Ravine plans.
 - q. Sheets L-1 to L-4 Lighting Plan.
- 5) Project 2015-017 The Pines at Blesi Floodplain Report by AE2S dated July 2015, revised August 2015

Findings:

- 1) A complete application was received on March 2, 2020. The 60-day decision period, per MN Statute 15.99 expires April 31, 2020.
- 2) Project work will consist of a new roundabout at the intersection of Pineview Lane North and CSAH 121, improve Pineview Lane to State Aid standards, reconstruction of Oakview Lane, installation of a multiuse trail along the west side of Pineview Lane connecting into the Elm Creek Park Reserve and general utility and drainage improvements.
- 3) Approximately 14 acres of ground will be disturbed, and 2.0 acres of new impervious areas created.

Stormwater Management.

- 4) Surface water before and after this project will generally flows to the east and south. It eventually flows under 129th Ave. (CR121) into the Elm Creek Park Reserve through a series of wetlands and floodplains for approximately 3,500 feet before reaching Hayden Lake (Elm Creek).
- 5) For stormwater management requirements, one biofiltration basin with engineered media and underdrains are proposed to provide water quality treatment. One additional filtration basin is proposed for retention near the water tower. Based on soil borings, infiltration is infeasible due to poorly infiltrating capabilities of the existing soils.

Rate controls:

- 6) Overall peak flows for the 2, 10 and 100-year storm events (based on Atlas 14) will be lower after construction from this site. One of the four sub-watershed areas will have a slight increase in peak flows. The remaining three sub-watersheds will see decreases for all their peak flows. This results in an overall reduction of the peak flows from this project.
- 7) The high-water elevation for the existing wetland basin for the wetland sub-watershed in the northwest portion of this site will increase 0.33' after construction (863.06 before vs 863.39 after).
 - a. No structures, septic, or low-floor elevations appear to be affected by this 0.33' increase.
 - b. The City of Dayton is aware of this increase in high water elevation.

Rate Control Flows

	2-yr (cfs)	10-yr (cfs)	100-yr (cfs)
Pre-Development Sub-watersheds			
South	19.1	40.7	91.3
Southeast	4.8	8.6	16.7
Southwest	1.4	4.6	10.0
Wetland	13.3	22.4	35.3
Overall Sum	38.6	76.3	153.3
Post-Development Sub-watersheds			
South	18.7	39.3	87.4
Southeast	3.7	6.7	13.2
Southwest	0.3	0.5	1.0
Wetland	15.3	24.7	37.7
Overall Sum	38.0	71.2	139.3

Abstraction Controls

- 8) The 1.92 acres of new impervious area will require 7667 cubic feet (0.176 acre-feet) of storage area for abstraction. One filtration basin south of the round-a-bout will hold and treat approximately 24,000 cubic feet of runoff for abstraction requirements from the new impervious areas on this project. The 24,000 cubic feet is equal to approximately a 3.4" rainfall event in the watershed draining into this basin.
- 9) The draw down period through the filter basin soil and out of the drain tile will occur in approximately 23 hours for 24,000 cubic feet of water storage.
- 10) Filtration design will exceed the Commission's requirements.

Water Quality Controls

- 11) Based on the P8 model the two basins will reduce total phosphorus (TP) and total suspended solids (TSS) as follows:

Water Quality Summary

Condition (based on 42.74 acres)	TP Load (lbs/yr)	TSS Load (lbs/yr)	Filtration (cu. ft.)	Annual Volume (ac. ft.)
Pre-development (baseline)	34.9	10128	N/A	42.74
Post-development without BMPs	38.5	11202	7,667	46.77
Post-development with BMPs	34.7	9516	~24,000	46.77
Net Change	-0.2	-612	-16,333	+4.03

* Based on P8 analysis

Floodplain Alteration.

- 12) Based on the hydrology and hydraulic study for The Pines at Blesi Farms (ECWMC project 2015-017), a 100-year base flood elevations (BFE) was determined on the existing FEMA Zone A floodplain located along the east side of this project corridor. The BFE in this basin was determined to be 858.78.
- 13) Based on the proposed cross-sections, this project will not impact the FEMA Zone A BFE.

Wetland Alterations

- 14) The LGU in charge of administering the MN WCA for this site is the City of Dayton.
- 15) Five (5) wetlands were delineated and approved by the LGU within the construction limits of this project.
- 16) Wetland Replacement plan has been noticed but not approved as of this review.
 - a. 14,879 sq. ft. of wetland impacts are proposed on 5 wetlands.
 - b. 3,781 sq. ft., of wetland impacts are requested to be exempt from the MN WCA requirements because they are considered incidental.
 - c. 11,098 sq. ft. of wetland impacts are proposed to be certified for replacement via the BWSR local road replacement program.
- 17) The Commission's wetland buffer standards are not required because this is a linear road/trail project.

Erosion and Sediment Control

- 18) Because this project will disturb over 1.0 acre, an NPDES Construction Stormwater Permit is required.
- 19) Wetlands must be protected by a double line of silt fence.
- 20) Erosion control plans meet the Commission's requirements.
- 21) North and South Ravine work appears to truncate before a stable grade on the rock riprap is obtained. Depending on the existing ground cover, we recommend acceptable velocities (2.5 fps for bare ground or 4.5 fps for established sod) based on a 10-year storm event be obtained where the riprap ends, and the natural ground begins.

Recommendation: Approval contingent upon:

- 1) Wetland alterations meet MN WCA and LGU requirements.

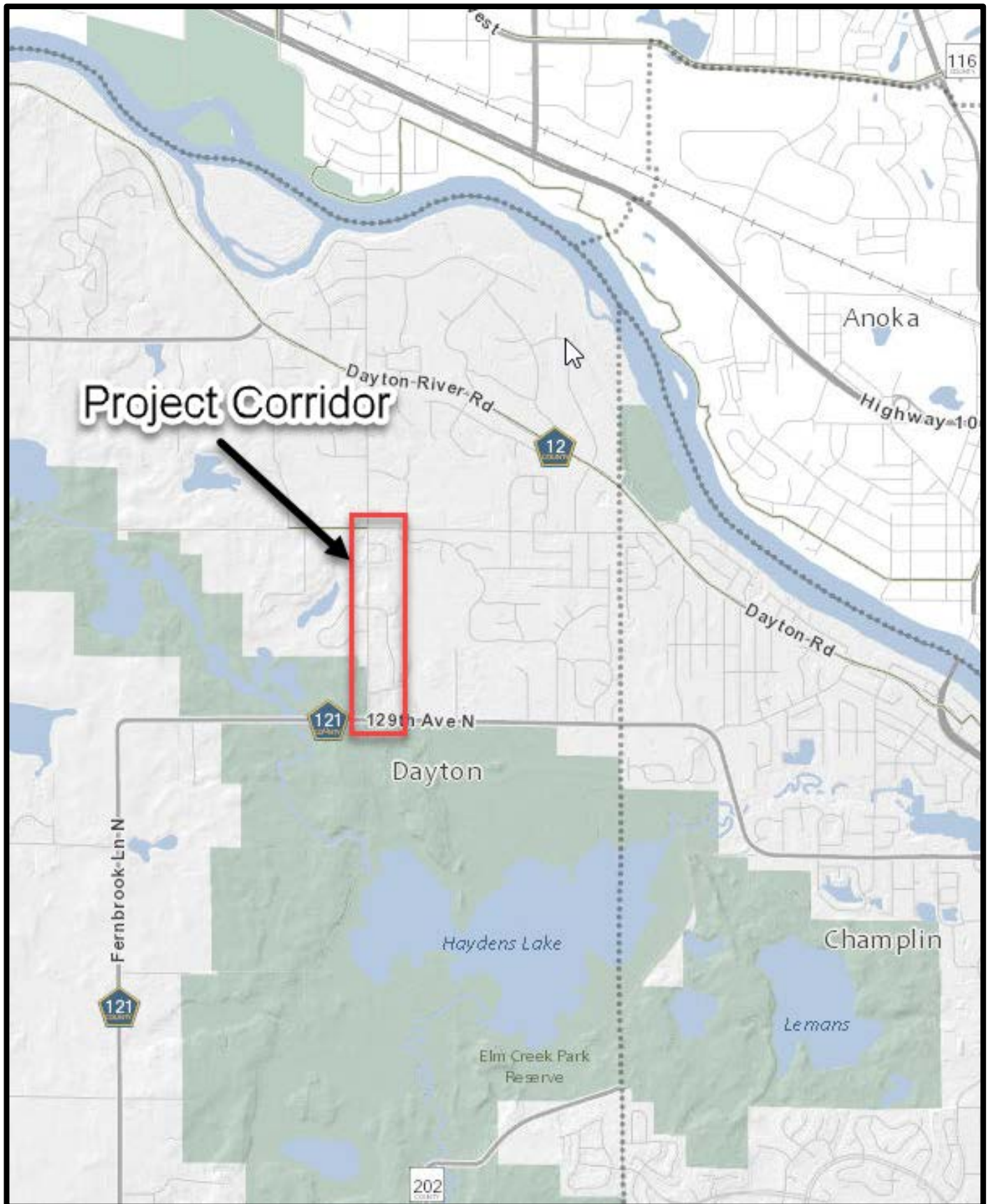
Barr Engineering
Advisor to the Commission

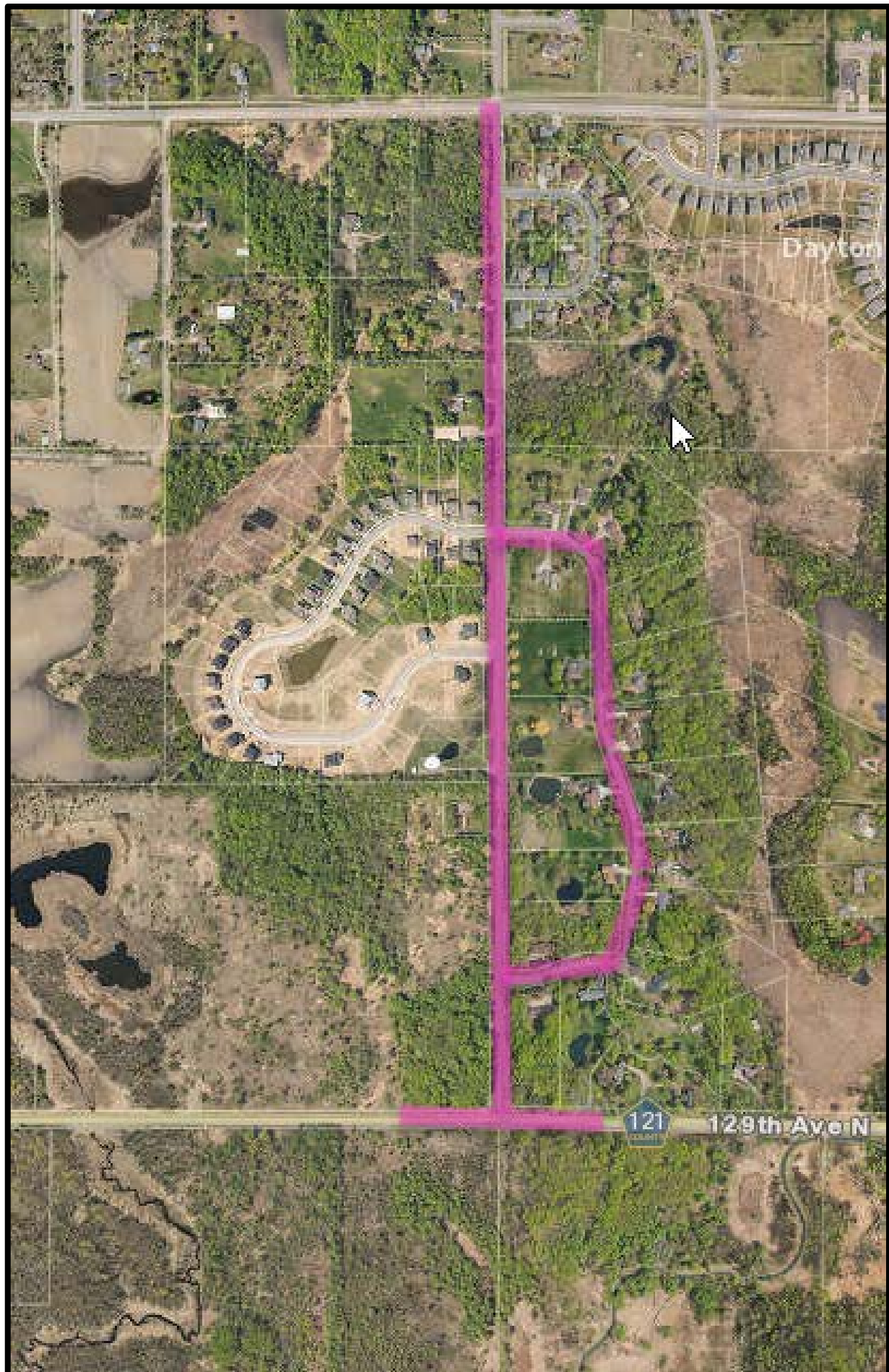


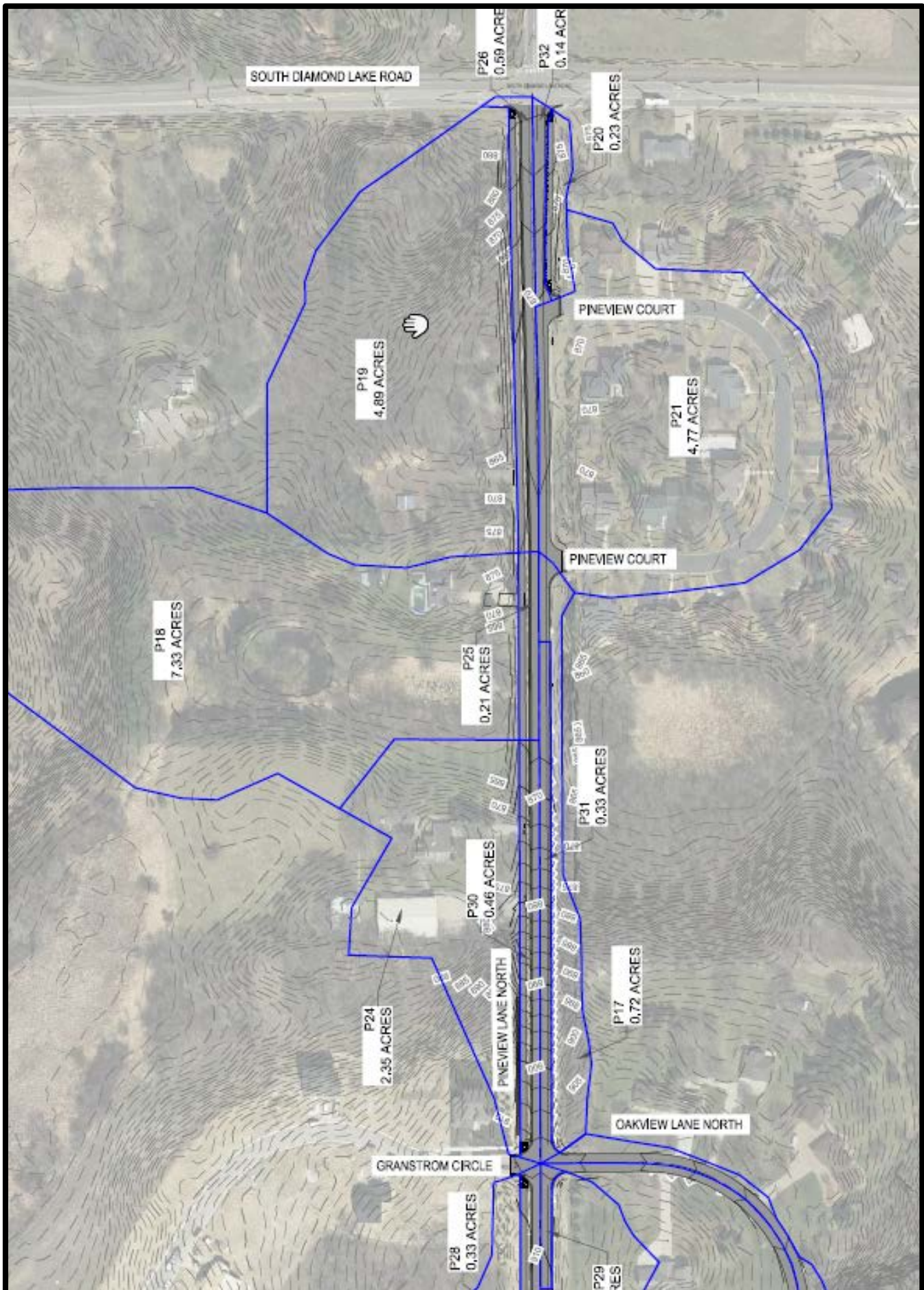
James C. Kujawa
Surface Water Solutions

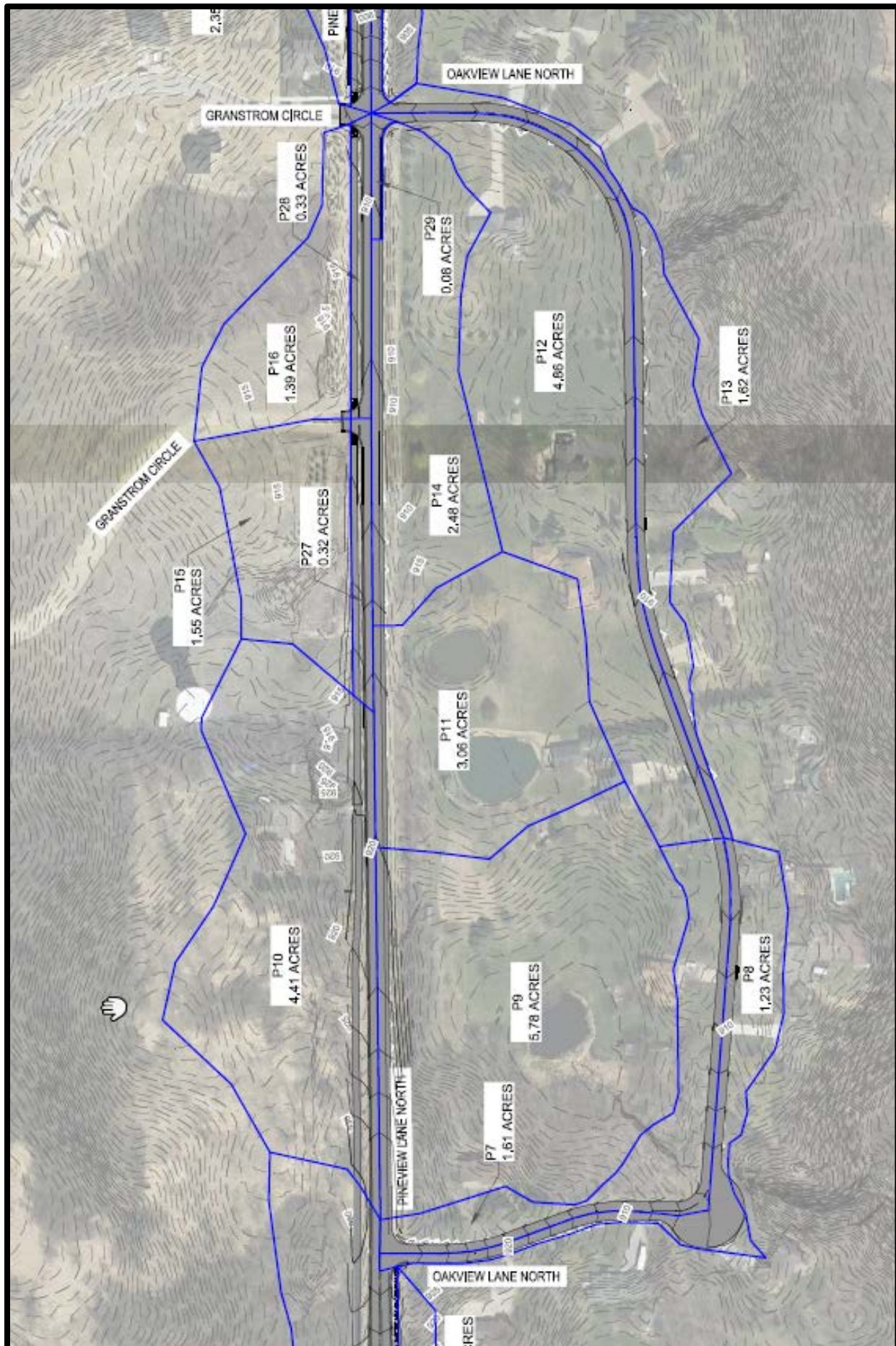
March 31, 2020
Date

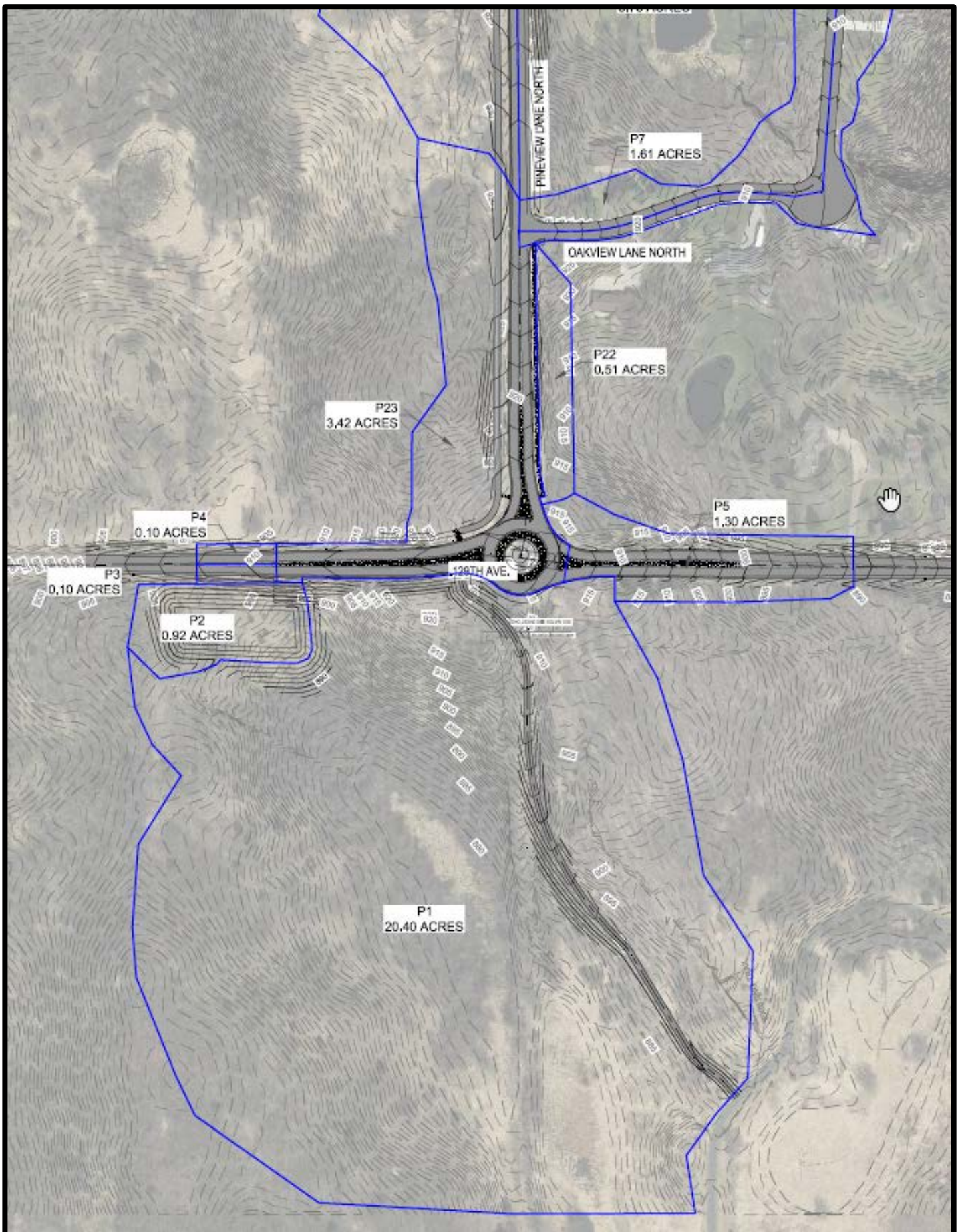
Location Map











elm creek

Watershed Management Commission

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Ione Gardens **Dayton, Project #2020-008**

Project Overview: This project is located at the NW intersection of CSAH 144 (Diamond Lake North) and 12 (Dayton River Road) in Dayton. It is three agricultural properties totaling 48.29 acres in size. 112 new single-family residential lots creating 16.84 new impervious surface areas are proposed for this development. The Commission's review will be for compliance to Rule D (Stormwater Management), Rule E (Erosion and Sediment Controls) and Rules G & I (Wetland Alteration & Buffer Strips)

Applicant: Dehn Development LLC, Attention Tom Dehn, 6781 Highway 10, Ramsey, MN 55303. Phone: 612-328-2215. Email: tom.dehn@powerlodge.com

Agent: Campion Engineering, Attention Marty Campion, 1800 Pioneer Creek Center, Maple Plain, MN 55359. Phone: 763-479-5172. Email: mcampion@campioneng.com

Exhibits:

- 1) ECWMC Request for Plan Review and Approval dated March 4, 2020 plus \$4,000 project review fee, received March 10, 2020.
- 2) Ione Gardens Grading Set by Campion Engineering Services dated March 4, 2020.
 - a. Sheet 1 of 16, Cover Sheet
 - b. Sheet 2 of 16, Existing Conditions
 - c. Sheets 3 to 5 of 16, Grading Plans
 - d. Sheets 6 to 8 of 16, Storm Water Pollution Prevention Plans
 - e. Sheet 9 to 13 of 16, Tree Inventory and Removal Plans.
 - f. Sheet 14 of 16, Grading & SWPPP Notes
 - g. Sheet 15 of 16, Details
 - h. Sheet 16 of 16, Hold Down Details.
- 3) Ione Gardens Stormwater Management Plan by Civil Methods Inc., dated December 9, 2019
- 4) Ione Gardens geotechnical exploration report by Haugo GeoTechnical Services dated March 2, 2020 with additional soil infiltration tests for borings holes 5, 12 and 13, by Haugo GeoTechnical Services dated March 5, 2020.
- 5) Cloquet Island Estates ECWMC project file 2018-033.

Findings:

- 1) A complete application was received on March 10, 2020. The initial decision deadline per MN 15.99 is May 9, 2020.

- 2) The existing land use is primarily agriculture cropland (37 acres) with approximately 4.5 acres of farmsteads/homesites and the remainder being trees/grassland (~6.0 acres) and one wetland basin 0.5 acres in size.
- 3) The existing soils and drainage patterns consist of:
 - a. NRCS soil survey information show the soils on site have high infiltration rates (>2.0"/hour) with water tables greater than 5.0 feet.
 - b. The east 24 acres drain into depressional landlocked areas with no runoff.
 - c. The north 14 acres drain into depressional areas with no runoff except during a 100-year storm event.
 - d. The remaining 15 acres drains into the existing wetland in the SW corner of this development.
 - e. Water that does flow off of this site will enter the Mississippi River about 800' east of CSAH 12.
 - f. Pre and post development drainage patterns will generally stay the same.

Stormwater Management (Rule D)

- 1) To manage the stormwater on this site, the applicant is proposing to:
 - a. Construct one wet detention pond in the SW corner of this project that will drain into the existing wetland. This wetland outlets into an existing storm sewer system located in the adjacent development. That pipe flows west then north.
 - b. Construct one wet-detention pond that will route low flows (< 10-year events) to an infiltration pond along CSAH 12. Most of the high flows (10-year events and greater) will be routed east into the infiltration pond, but some water will also flow west into the storm sewer system in the existing development.
 - c. Construct an infiltration pond on the north side of the site that will outlet into an existing drainage swale that runs under CSAH 12 before running into the Mississippi River. This pond is landlocked until approximately a 50 to 100-year storm event
 - d. Infiltration basins will have pre-treatment of sediment by the design and construction of forebays, vegetated swales and sump/baffle structures.
- 2) The City of Dayton will provide the long-term operation and maintenance on the stormwater facilities for this site. No additional agreements will be necessary.
- 3) Additional stormwater information is necessary for our complete review.
 - a. Stormwater utility site plans and elevation are needed.
 - b. Stormwater at the low point at the Berkshire Lane entry appears to rout water into the wetland without treatment.
 - c. The stormwater plan mentions the existing wetland in the SW corner of this site has a pipe outlet in the adjacent (west) property that drains northerly. Cloquet Island Estates utility plans, revision date of August 7, 2018, shows this proposed pipe elevation at 862.5 (no pipe size shown)
 - i. It appears approximately 90 acres drains into the wetland basin in the SW corner of this site. Hydrology and high-water elevations will be necessary for the wetland and ponding basin 1P.
 - d. Basin 2P is designed to flow east into basin 2iP at an elevation of 861.0. If this is the case the NWL on 2P should be 861.0, not 861.5.

- i. Actual infiltration (discarded flows) for basin 2iP should be determined using ½ the actual infiltration rates and beginning the pond elevation at 959.5 per the site plan.
- ii. Basin 2P flows into an existing storm sewer in the Cloquet Island Estates development. Pond 2P must be modeled using the existing storm sewer plans.
- e. Drawdown times for the water quality storm event for basins 2iP and 3iP are necessary. Actual infiltration rates should be used.
- f. Outlet control structure details are necessary.
- g. Locations of sump manholes are necessary.

Abstraction Controls

- 4) 16.84 acres of new impervious areas will be created on site.
- 5) Abstraction volume requirements will be 16,232 cubic feet.
- 6) Actual abstraction proposed will be by infiltrating 132,237 cubic feet in infiltration basins 2iP and 3iP.
 - a. Hydrology design estimates for the on-site infiltration rates were estimated at 0.8 "/hour. Actual infiltration results averaged 23 & 11 inches per hour in pond 2iP and 17 inches per hour in pond 3iP.
 - b. Ground water was not encountered in the soil borings (21' depth) on the basins.

Water Quality Controls

- 7) Water quality will be provided through a combination of wet detention (NURP) ponds and the infiltration basins.
- 8) Before and after water quality design information does not represent what is happening on this site.
 - a. To compare pre vs post water quality, the same modeling program is required. In this case, P8 or MIDS should be used
 - b. Before conditions must consider that there is no discharge of TP or TSS from the north and east sub-watershed areas (36.8 acres).
 - c. Pre-development conditions only need to model the remaining 15.2 acres that drain into the existing wetland in the SW corner of this site.
 - d. Post development conditions should consider no discharge occurring from basins 2P, 2iP and 3iP and their subcatchments for the water quality storm event.
 - i. Water quality modeling should be analyzed only for the 16.53 acres from sub-watersheds 1 and 1a.

Rate and High-Water Controls

- 9) A summary of peak flows for the 2, 10 and 100-year storm events is provided below.

Rate Control Summary

		2-yr (cfs)	10-yr (cfs)	100-yr (cfs)
North and East Flows	Pre-Development (36.8 Acres)	0	0	6.0
	Post-Development (5.1 Acres)	0	0	1.8
West Flows	Pre-Development (15.2 Acres)	0.7	6.3	32.0
	Post Development (46.9 Acres)	0.7	3.3	22.2

- 10) The lowest floor elevation on the existing home on Lot 1, Block 1 appears be within the base flood elevation for Basin 1P.
- 11) The lowest floor elevation on the existing homes adjacent to Basin 3iP must be verified for 2.0' freeboard above the 100-year elevation. Cloquet Island Estates utility plans with revision date of August 7, 2018 provide for slab on grade lots with first floor elevation at 868.2 and 869.2.
- 12) All other proposed basement elevations provide 2.0' freeboard necessary above the adjacent pond 100-year elevations.
- 13) High water and minimum adjacent floor elevations for basins will be as follows:

Critical Basin Elevations

Basin	Pond Elevation 100 Year Event	Lowest Most Floor Allowed
Wetland	Not determined	Not determined
Basin 1P*	866.0*	868.0*
Basin 2P	863.5	865.5
Basin 2iP	862.0	864.0
Basin 3iP	864.8	866.8

*Note: Basin 1P elevation may change based on wetland hydrology (See item 3).

Wetland Alterations and Buffer Strips (Rules G & I)


- 14) The City of Dayton is the Local Unit Government (LGU) in charge of administering the Wetland Conservation Act on this site.
 - a. Approximately 12,750 sq. ft. of impacts will occur on the existing wetland in the SW corner of this site.
 - b. To date, no wetland replacement plan has been received by the ECWMC for these impacts.
- 15) A 25' buffer is proposed on the NE portion of the remaining wetland. The remainder of the wetland is bounded by the Berkshire Lane and North Diamond Lake Road rights-of-way. Roads are exempt from the Commission's buffer requirements.
 - a. Wetland buffers widths meet the Commissions requirements
 - b. Wetland buffer monumentation must be provided.

Erosion and sediment control plans (Rule E)

- 16) Erosion and sediment controls will meet the Commission standard.

Recommendations: None currently.

On Behalf of Barr Engineering
Advisor to the Commission



James C. Kujawa
Surface Water Solutions LLC

March 31, 2020
Date

Location Map

